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► **Shaping skills and lifelong learning for the future of work**

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Report VI

▶ **Shaping skills and lifelong learning
for the future of work**

Sixth item on the agenda

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► Introduction

Setting the stage: Skills for a brighter future

1. Technological change and globalization, along with demographic and climate change, are transforming the world of work and opening new opportunities – but they also pose challenges for people in obtaining access to decent work and challenges for enterprises in adapting sustainably. The outbreak of the COVID-19 pandemic in the beginning of 2020 is likely to cause the most serious disruption to the world of work in modern times, accelerating the structural transformations that have evolved over years and aggravating existing inequalities.
2. In most countries, regardless of their stage of development, the ongoing social and economic transformations continue to raise this key question about the future of work:

What will be the jobs of the future and what skills will they demand?

3. Skills mismatches are a growing challenge in today's labour markets, with many consequences for workers, businesses and the future of work. The reinvigorated momentum for investing in people's capacities reflects a heightened sense of urgency and shared responsibility, especially in the post-pandemic recovery process, which calls for placing greater priority on skills development and empowering people from a lifelong learning perspective. Skilling, reskilling and upskilling throughout all stages of life is the precondition and an accelerator for people to access decent work opportunities and enable smooth transitions into labour markets and within labour markets.
4. The call to Member States in the ILO Centenary Declaration for the Future of Work is to invest in human capacities and the institutions of work to shape a fair, inclusive and secure future of work with full, productive and freely chosen employment and decent work for all. This call has assumed even greater importance in the aftermath of the COVID-19 crisis: skills development and lifelong learning are prioritized in the ILO's Strategic Plan for 2022–25,¹ Programme and Budget for the biennium 2020–21² and proposed Programme and Budget for the biennium 2022–23.³ Skills and lifelong learning are at the core of the human-centred approach to the future of work enunciated in the Declaration and are central to efforts to ensure all people benefit from the full potential of technological progress and other drivers of change so that no one will be left behind.⁴
5. Skills development and lifelong learning are fundamental enablers of decent work, productivity and sustainability that can raise the value and output of labour, empower the lives of workers and enrich societies. For *individuals*, they provide the key to pursue their interests and aspirations, access the labour market, escape from poverty and social

¹ GB.340/PFA/1(Rev.1), para 32.

² ILO, *Programme and Budget for the Biennium 2020–21*.

³ ILO, *Preview of the Programme and Budget proposals for 2022–23*.

⁴ The general discussion on inequalities and the world of work and the recurrent discussion on the strategic objective of social protection (social security), to be held during the 109th Session of the International Labour Conference, will also contribute to the discussion on leaving no one behind through decreasing inequalities and improving social protection; the messages of the three reports that inform those discussions are aligned (see ILO, "[Agenda of the 109th Session of the International Labour Conference](#)").

exclusion and adapt to the changing world of work. For *enterprises*, they provide a strategic competitive advantage for productivity and innovation. For *societies*, they create opportunities for economic transformation, job creation, inclusiveness, democracy, active citizenship and sustainable growth.

6. A new generation of skills and a lifelong learning ecosystem need to be jointly developed and implemented by governments and social partners to ensure a just and inclusive transition to a future of work that contributes to sustainable development in its economic, social and environmental dimensions. Such an ecosystem should be part of an integrated approach to the creation of decent jobs for all, reinforcing the supply-side pillar of functioning labour markets to complement the demand-side pillar and matching interventions. The system should be accessible to all, with a specific focus on women, people in precarious employment and all disadvantaged and vulnerable groups.
7. While the role that education and training systems can play to address these challenges is crucial, they are constrained by supply-driven approaches, limited capacity, poor quality, an inability to fully address gender, equity and equality issues and a general lack of financial, human and material resources. Skills development policies, systems and resources in many countries need to be urgently developed and strengthened to meet the current and future challenges. Social dialogue holds the key to shaping education and training systems and improving the links between education and training and the world of work to ensure the benefits of structural change are shared fairly. The ILO's Human Resources Development Convention, 1975 (No. 142) prescribes that "[e]ach Member shall gradually extend, adapt and harmonise its vocational training systems to meet the needs for vocational training throughout life of both young persons and adults in all sectors of the economy and branches of economic activity and at all levels of skill and responsibility" (Article 4). Although the challenges will vary across regions and national contexts, education and training systems all over the world share a common imperative – to rethink, adopt and implement lifelong learning as an organizing principle for education and skills development – with social dialogue playing a very important role at all stages of development and implementation of such policies and programmes. The renewed imperative for lifelong learning aims to better prepare people, businesses and society for the future by meeting the learning needs of both young persons and adults in all sectors of the economy and branches of economic activity and at all levels of skill and responsibility.
8. The outbreak of COVID-19 has added new challenges to education and skills development systems. Posing a major health threat to millions of people, it has changed the way people work, communicate, teach and learn. Businesses across a range of economic sectors, especially smaller enterprises, have faced catastrophic losses that threaten their operations and solvency. Full or partial lockdown measures affected almost 2.7 billion workers (about 81 per cent of the world's workforce) during the first quarter of 2020⁵ and continue to affect 77 per cent of workers as of early 2021,⁶ making them vulnerable to income loss and layoffs. Businesses have had to adapt to remote working or find solutions to compensate closures, while workers who lost jobs in certain sectors have had to find alternate employment. Women, who bore the brunt of unpaid care work, have lost jobs at higher rates than men, reversing recent gender equality gains.⁷ Reskilling and upskilling have

⁵ ILO, "ILO Monitor: COVID-19 and the World of Work: Second Edition", 2020.

⁶ ILO, "ILO Monitor: COVID-19 and the World of Work: Seventh Edition", 2021.

⁷ UN-Women, "Whose Time to Care: Unpaid Care and Domestic Work during COVID-19", 2020; and UN-Women, "Fallout of COVID-19: Working Moms are being Squeezed out of the Labour Force", 2020.

become an urgent priority for many workers looking to retain or find a job. In the education and training sector as well, teachers and trainers have faced unique challenges as schools and technical and vocational education and training (TVET) institutions have been shut down. They have had to acquire new skills to teach and assess online, adopting their methods and resources, often without institutional support or the time needed to make such adjustments given the need to act quickly. In many countries, teachers and trainers have also faced huge challenges in obtaining access to equipment, tools and training opportunities to teach online, especially in disadvantaged communities. Remote working for prolonged periods has added additional safety risks for educators and many other workers with inadequate space and facilities to work remotely. Moreover, occupational safety and health risks are felt strongly by frontline workers, including teaching and education staff, who are under pressure to work on-site, where there is a high risk of infection.⁸

9. These unprecedented times have added a heightened sense of urgency to calls for increased investment in people's capabilities. Humanitarian, economic and social measures need to focus on the creation of employment and skilling opportunities for all, especially women and those who are disadvantaged.

The ILO and the global commitment to quality education, skills development and lifelong learning

10. Skills development and lifelong learning have long been at the heart of the work of the International Labour Organization (ILO). The ILO's mandate for skills, training and lifelong learning is based on its Constitution and has been set out in international labour standards and other instruments that promote opportunities for women and men to obtain decent work in conditions of freedom, equity, security and dignity. Building on the Paid Educational Leave Convention, 1974 (No. 140) and Convention No. 142, the Human Resources Development Recommendation, 2004 (No. 195) recognizes that "education, training and lifelong learning contribute significantly to promoting the interests of individuals, enterprises, the economy and society as a whole, especially considering the critical challenge of attaining full employment, poverty eradication, social inclusion and sustained economic growth in the global economy". It calls on "governments, employers and workers to renew their commitment to lifelong learning" and emphasizes that "education, training and lifelong learning are fundamental and should form an integral part of, and be consistent with, comprehensive economic, fiscal, social and labour market policies and programmes that are important for sustainable economic growth and employment creation and social development". In 2008, the International Labour Conference discussed the topic "Skills for improved productivity, employment, growth and development" and provided a number of conclusions that have since then steered the ILO's work in this area. The second recurrent discussion on employment in 2013 tackled important aspects of skills responsiveness to labour market needs for more and better-quality jobs, as a crucial part of a comprehensive approach to employment policies.
11. Guided by these instruments and conclusions and the evolving knowledge base, the ILO provides technical support and policy advice to its constituents on skills policies and system reforms, skills anticipation, skills for social inclusion, recognition of prior learning (RPL) and work-based learning (WBL), among others. The ILO therefore plays a leading role in

⁸ ILO, "COVID-19 and the Education Sector", 2020.

supporting global work on skills and lifelong learning for sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

12. Skills development, quality education and lifelong learning for employment and decent jobs are integral to the political commitment of the 2030 Agenda for Sustainable Development and the ILO's contribution to it. Goal 4 of the Sustainable Development Goals (SDGs) focuses on ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all – from early childhood to higher education and from general to vocational education and training (VET). It also emphasizes the need to substantially increase the number of young people and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship. Goal 8 calls for promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all, with a particular emphasis on youth not in employment, education or training. This requires integrated strategies to ensure that the transformative vision of the 2030 Agenda becomes a reality in its three dimensions – economic, social and environmental.

Shaping skills and lifelong learning for the future of work: The way forward

13. Global challenges and strong calls for paradigm shifts from the ILO's constituents have created a new policy context on skills and lifelong learning that is reflected in the Centenary Declaration and the ILO's Strategic Plan for 2022–25, demonstrating the priority that they place on the promotion of skills development and lifelong learning.
14. The current crisis triggered by COVID-19 has made it necessary to consider the implications of the pandemic for the implementation of the Centenary Declaration and its recommendations, both in formulating immediate responses and also with a view to moving beyond the crisis. At the virtual Global Summit on COVID-19 and the World of Work, the ILO's constituents acknowledged the Centenary Declaration's human-centred approach as the foundation for an effective international cooperation in response to the crisis.⁹ Investing in skills and reshaping education and training –including investing in the capacity of teachers and trainers by leveraging digital technologies and innovative methods, while supporting the rights and improved working conditions of teachers and trainers – are seen as critical elements of recovery measures across the world.¹⁰
15. At its 340th Session, the ILO's Governing Body provided guidance on reviewing the Programme and Budget proposals for 2022–23 and the ILO Strategic Plan for 2022–25.¹¹ A strong focus on applying the provisions of the ILO Centenary Declaration for the Future of Work while integrating recovery measures was supported. The Governing Body called on the ILO to take the lead role on skills and lifelong learning, with a strong emphasis on social dialogue and tripartism, human-centred recovery, promoting opportunities for decent work and increasing productivity as a vehicle for inclusive recovery and resilience.
16. In order to effectively implement the decision of the Governing Body at its 340th Session (2020), the general discussion on skills and lifelong learning to be held at the 109th Session

⁹ See ILO, "ILO Global Summit on COVID-19 and the World of Work - Building a Better Future of Work", 1–9 July 2020.

¹⁰ UNESCO, "Supporting Teachers in Back-to-School Efforts: Guidance for Policy Makers", 2020.

¹¹ GB.340/HL/PV.

of the International Labour Conference (postponed to 2021) ¹² is expected to provide clear and innovative guidance to develop ILO's skills and lifelong learning strategy. In reaffirming and enhancing the ILO's contribution to the implementation of the 2030 Agenda, the discussion will be of the outmost importance for the strategic positioning of the Organization as a global leader on skills and lifelong learning. The discussion will complement and reinforce the standard-setting discussion on apprenticeships (2022 and 2023) and the third recurrent discussion on employment (2022). The general discussion is expected to develop a strategic vision on skills and lifelong learning for a human-centred post-crisis recovery and beyond, seeking to lay the foundation for impactful action and delivery by the ILO for years to come.

Objectives of the report

17. This report aims to contribute to an informed and balanced discussion of the issues surrounding skills and lifelong learning in the changing world of work affected by the current global challenges, including the extraordinary COVID-19 crisis. It examines the role of the ILO and its constituents and the implications of the global megatrends in the area of skills development systems. The report also builds on and advances the emphasis of the Centenary Declaration on skills and lifelong learning and the ILO role in the pandemic recovery process. It therefore seeks to contribute to the discussion of how skills development systems can respond to the crisis and the challenges of today and tomorrow in order to translate their outcomes into decent employment, productivity and sustained growth for all.

¹² GB.337/INS/PV.

► Chapter 1

Global context, trends and challenges

- 18.** The world faces unprecedented challenges that will have a profound impact on workers and businesses, economies and societies. Skills development and lifelong learning have an important role to play in enabling enterprises, workers and societies to adapt to and shape the megatrends and seize opportunities, which in turn calls for an adjustment of policies and systems. The COVID-19 pandemic has severely disrupted labour markets but has also accelerated some of the longer-term megatrends, leading to a combination of structural and crisis-related pressures and creating enormous challenges for employment, decent work and skilling opportunities.

1.1. Megatrends and skills implications

Technological change and digitalization

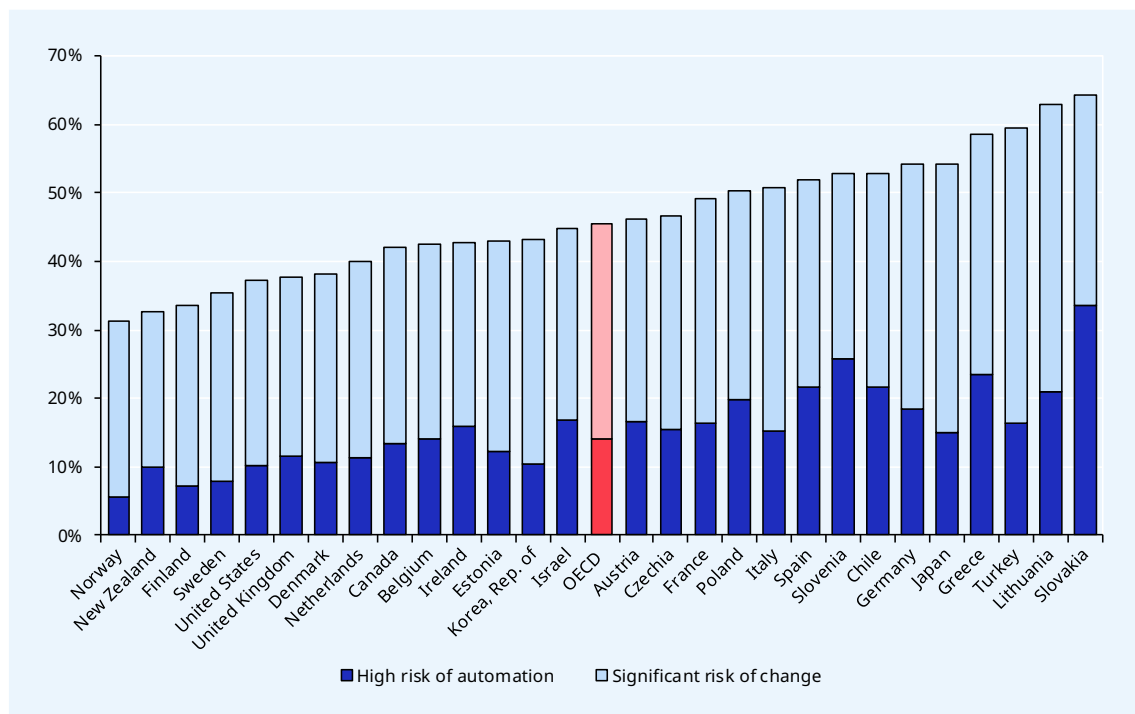
- 19.** Digitalization and technological innovations – such as artificial intelligence (AI), automation and robotics – and the way we manage and choose to use them will have a significant impact on labour markets, influencing how people work, the type of jobs they perform and the skills they need to carry out new tasks effectively.
- 20.** In the long term, technological change is likely to generate many jobs through its direct, indirect and induced effects.¹³ In addition, one third of all jobs are likely to change radically as some job tasks are automated or augmented by technologies such as AI and machine learning (figure 1). Researchers estimate an expected average shift of 42 per cent in required workforce skills over the 2018–22 period, which will result in fundamental changes in job profiles and most probably will be further impacted by the crisis. These dynamic changes may affect millions of workers, requiring them to update and upgrade skills and change jobs or even occupations¹⁴ and posing the fundamental question of the changes needed at all levels of education and all forms of learning to manage this transition.¹⁵

¹³ Global Commission on the Future of Work, *The Impact of Technology on the Quality and Quantity of Jobs* (ILO, 2018); Irmgard Nübler, *New Technologies: A Jobless Future or Golden Age of Job Creation?* Working Paper No. 13 (ILO, 2016); ILO, “New Automation Technologies and Job Creation and Destruction Dynamics”, 2017.

¹⁴ MGI, *Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation*, 2017.

¹⁵ WEF, *Towards a Reskilling Revolution. A Future of Jobs for All*, 2018; MGI, *Jobs Lost, Jobs Gained*; David H. Autor and Michael J. Handel, “Putting Tasks to the Test: Human Capital, Job Tasks and Wages”, *Journal of Labor Economics* 31, No. 2 (2013): 59–96; Melanie Arntz et al., *The Risk of Automation for Jobs in OECD Countries: A Comparative Analysis* (OECD, 2019); Richard B. Freeman, “Who Owns the Robots Rules the World”, *IZA World of Labor* 5 (2015): 1–10.

► **Figure 1. Percentage of jobs at high risk of automation and at risk of significant change in OECD countries**



Source: OECD, *OECD Employment Outlook 2019: The Future of Work* (2019).

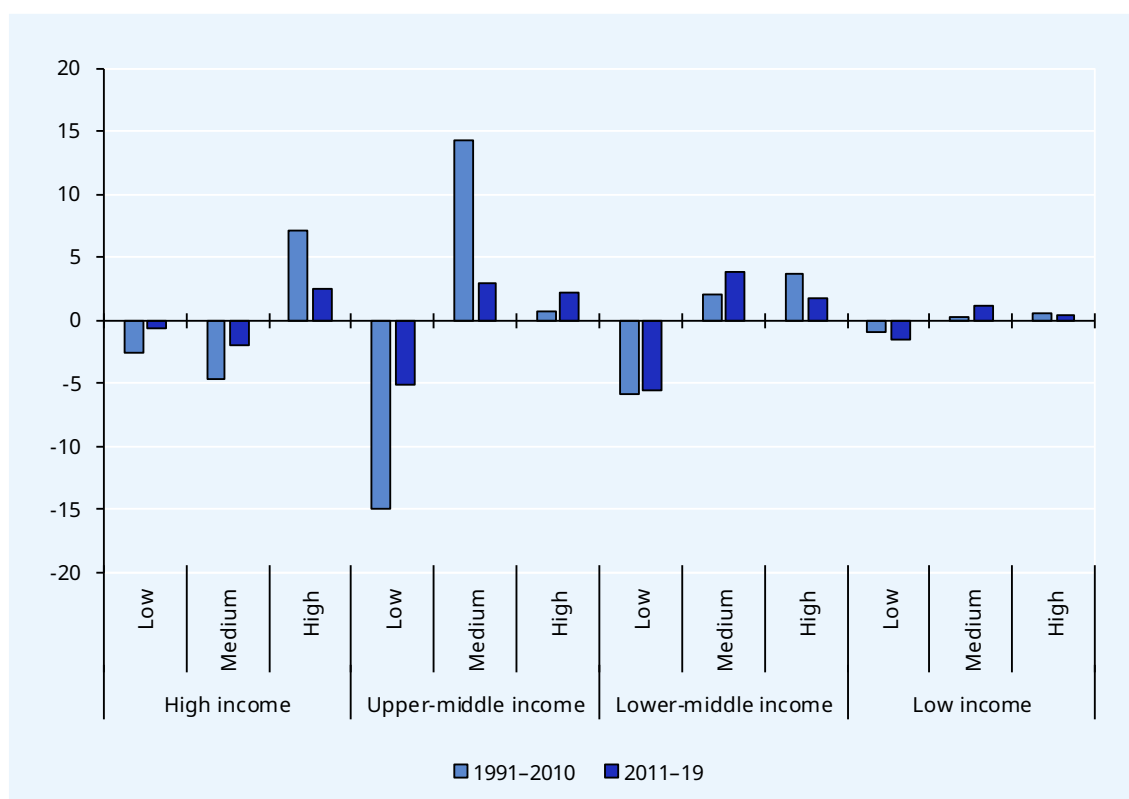
- 21.** Automation and digitalization are reducing the demand for routine and manual tasks and increasing the demand for non-routine tasks, cognitive skills such as problem-solving, and interpersonal and other core skills.¹⁶ At the same time, digitally intensive jobs are at lower risk of being automated.¹⁷ Digitalization penetrates all sectors of the economy, but not evenly across and within sectors or across countries. Much depends on infrastructure and the level of digital connectivity: for instance, 80 per cent of the population in Europe have access to the internet, compared with 45 per cent in developing countries and 20 per cent in least developed countries, where men are 52 per cent more likely to be online than women.¹⁸
- 22.** Evidence for all income groups shows a consistent employment shift towards relatively higher levels of skills, and that trend is expected to continue (figure 2). Upper-middle-income countries have experienced increased employment in high- and medium-skill occupations and decreased employment in low-skill occupations. In low-income and lower-middle-income countries, a shift towards middle- and higher-skill occupations is evident. In high-income countries, the employment shares of both medium-skill and low-skill occupations have decreased. The drop in medium-skill jobs in advanced economies is partly due to the routine character of tasks in these jobs (making them prone to automation) and partly due to offshoring, both of which have contributed to the so-called polarization of jobs in most industrialized countries.

¹⁶ ILO and OECD, *Global Skills Trends, Training Needs and Lifelong Learning Strategies for the Future of Work*, 2018; Jae-Hee Chang and Phu Huynh, *ASEAN in Transformation: The Future of Jobs at Risk of Automation* (ILO, 2016).

¹⁷ OECD, "Automation and Independent Work in a Digital Economy", 2016.

¹⁸ UN, *Report of the Secretary-General on SDG Progress 2019: Special Edition*, 2019; and World Wide Web Foundation, "The gender gap in internet access: using a women-centred method", 2020.

► **Figure 2. Changes in employment composition by broad skill level (high/medium/low), 1991–2010 and 2011–19**



Source: Calculations based on ILOSTAT, ILO modelled estimates, November 2020.

23. These trends illustrate a skill-biased technological change. In many countries, jobs have already been lost in manufacturing and parts of the services sectors and only a small number of workers have been prepared to shift to higher-skill jobs. The majority have been forced to accept lower-skill and lower-paying jobs, contributing to labour market polarization and growing inequality.¹⁹ Even though the potential net employment effects of technological change and digitalization on jobs are expected to be positive, the loss of jobs in the short term may cause costly and painful transitions that create the need to reskill and upskill the workforce on a massive scale. Cushioning the undesired effects of such disruptive technological changes and maximizing their potential benefits will be heavily dependent on the availability of skills development opportunities.
24. COVID-19 has accelerated the digital transformation of economies and societies. The impact of the pandemic on the world of work has highlighted the importance of digital skills for almost everyone, including workers, learners, teachers and trainers. These processes will require widening and upgrading the digital skills pool in society; improving access to digital infrastructure and connectivity; developing digital solutions, platforms and resources; and supporting social adaptation to this dynamic technological advancement.
25. In education and training, these changes have accelerated the take-up of online and distance learning and are transforming assessment and certification practices. Apart from the obvious potential benefits, this situation may create a bigger digital divide in relation to

¹⁹ Global Commission on the Future of Work, *The Impact of Technology on the Quality and Quantity of Jobs*.

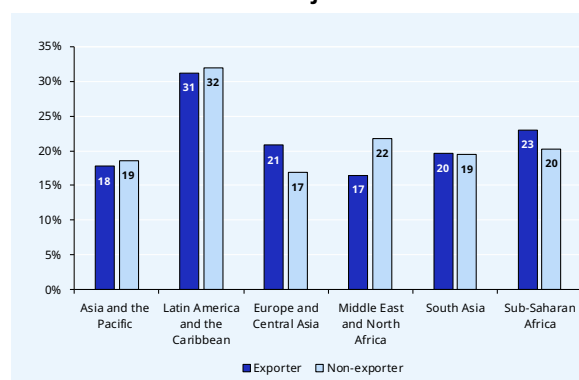
access and quality in education and training, as well as additional challenges for working conditions and social protection arrangements.

Globalization and trade

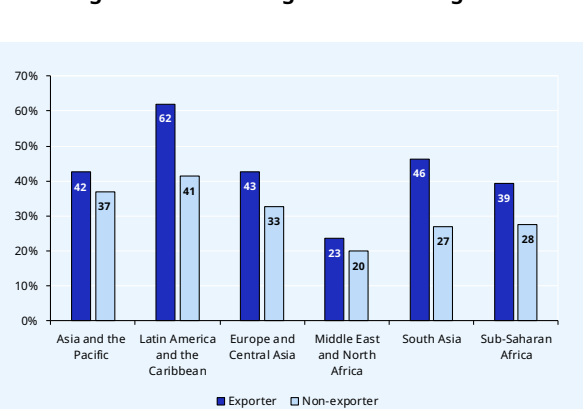
26. Globalization has opened up markets and extended their geographical boundaries. International trade has expanded rapidly since 1990, powered by the rise of global value chains as technological advances – in transportation, information and communication – have reduced trade barriers and enabled manufacturers to extend production processes beyond national borders. New, knowledge-intensive domestic and foreign investments have shifted production jobs to developing countries but have also transformed global workplace practices, contributing to emerging sectors and occupations and the skills they demand.²⁰
27. Participation in global value chains has increased the demand for matching skills – from core foundational and interpersonal skills to digital skills – with the high-level and complex cognitive and technical functions required for countries to specialize in the most technologically advanced manufacturing industries and in complex business services.²¹ Export-oriented businesses are often more aware of business constraints related to skills shortages. This is particularly the case among exporting firms in Europe and Central Asia and in sub-Saharan Africa, which is why exporting businesses usually invest more heavily in their workforce.²² Also, offshoring firms have relatively more domestic jobs involving non-routine and interactive tasks²³ (figure 3).

► Figure 3. Exporting businesses are more aware of skills deficiencies

Percentage of firms identifying an inadequately educated workforce as a major constraint



Percentage of firms offering formal training



Source: World Bank, *Enterprise Surveys*, 2009–2019, latest years available.

28. In addition, technology spillover may result in reshoring, meaning that jobs – especially medium-skill production jobs – that were offshored to developing economies might be

²⁰ ILO, *Global Employment Policy Review 2020: Employment Policies for Inclusive Structural Transformation*, 2020.

²¹ OECD, *OECD Skills Outlook 2017: Skills and Global Value Chains*, 2017; ILO and WTO, *Investing in Skills for Inclusive Trade: A Joint Study of the International Labour Office and the World Trade Organization*, 2017.

²² The investment in workforce training by firms depends on the type of employment contract. Temporary and platform workers typically have lower access to training.

²³ Sascha Becker et al., "Offshoring and the Onshore Composition of Tasks and Skills", *Journal of International Economics* 90, No.1 (2013): 91–106.

transferred back to developed economies.²⁴ If trained workers at this medium-skill level are available, this trend could influence the skills composition of some economies and at least partially discontinue the job polarization trend.

29. COVID-19 is adding to substantial changes in the above-mentioned processes, causing shifts in the structure of economies and travel and logistics disruptions, reshaping trade patterns and interrupting global supply chains. These developments not only have an immediate employment impact but also have a more fundamental impact for both developing and developed countries resulting from the potential restructuring involved, including reshoring or near-shoring of production (from developing back towards developed countries), greater reliance on regional supply chains as well as multiple sourcing of intermediate inputs.²⁵ This restructuring of global supply chains has profound implications for the skills needs of the workforce as core drivers of resilient economic diversification and the transition to higher value-added activities.

Climate change and environmental degradation

30. Climate change and environmental degradation affect our lives, earnings and economies and are among the key drivers of the growing demand for skills for green jobs. In the framework of the Paris Agreement on Climate Change (2015), countries have committed themselves to the implementation of nationally determined contributions that include ambitious climate adaptation and mitigation measures in many sectors and will significantly affect the demand for related skills. In addition, green markets and clean technologies have contributed to the process of job creation, destruction and change. To better respond to this crucial transformation, education and skills policies need to adapt, especially by adding new skills for environmental sustainability to core employability skills, including in general education curricula, as well as skills for green jobs in TVET.
31. Recent ILO research has estimated that under two policy scenarios – the energy sustainability scenario and the circular economy scenario²⁶ – more than 100 million jobs may be created but close to 80 million jobs may be destroyed. This implies a sizeable workforce transition – with the greatest impact on male-dominated occupations. Overall, job creation linked to the greening of economies will be concentrated in medium-skill jobs, with the potential to offset other labour market disruptions, such as globalization and technological change (figure 4).²⁷ In terms of occupational skills effects, large-scale reallocation within broadly defined occupations can be assumed. The sets of skills that workers will be able to reuse in growing industries include not only core work skills (collaboration, communication and problem-solving, among others) but also other semi-technical and technical transferable skills (sales and marketing, scheduling, budgeting, engineering and others). Many new jobs are expected to be created in the construction trade, while workers in manufacturing, transport and sales will require major skills adjustments. Addressing gender segregation will be critical for women to also benefit from new jobs created.

²⁴ Nübler, *New Technologies*.

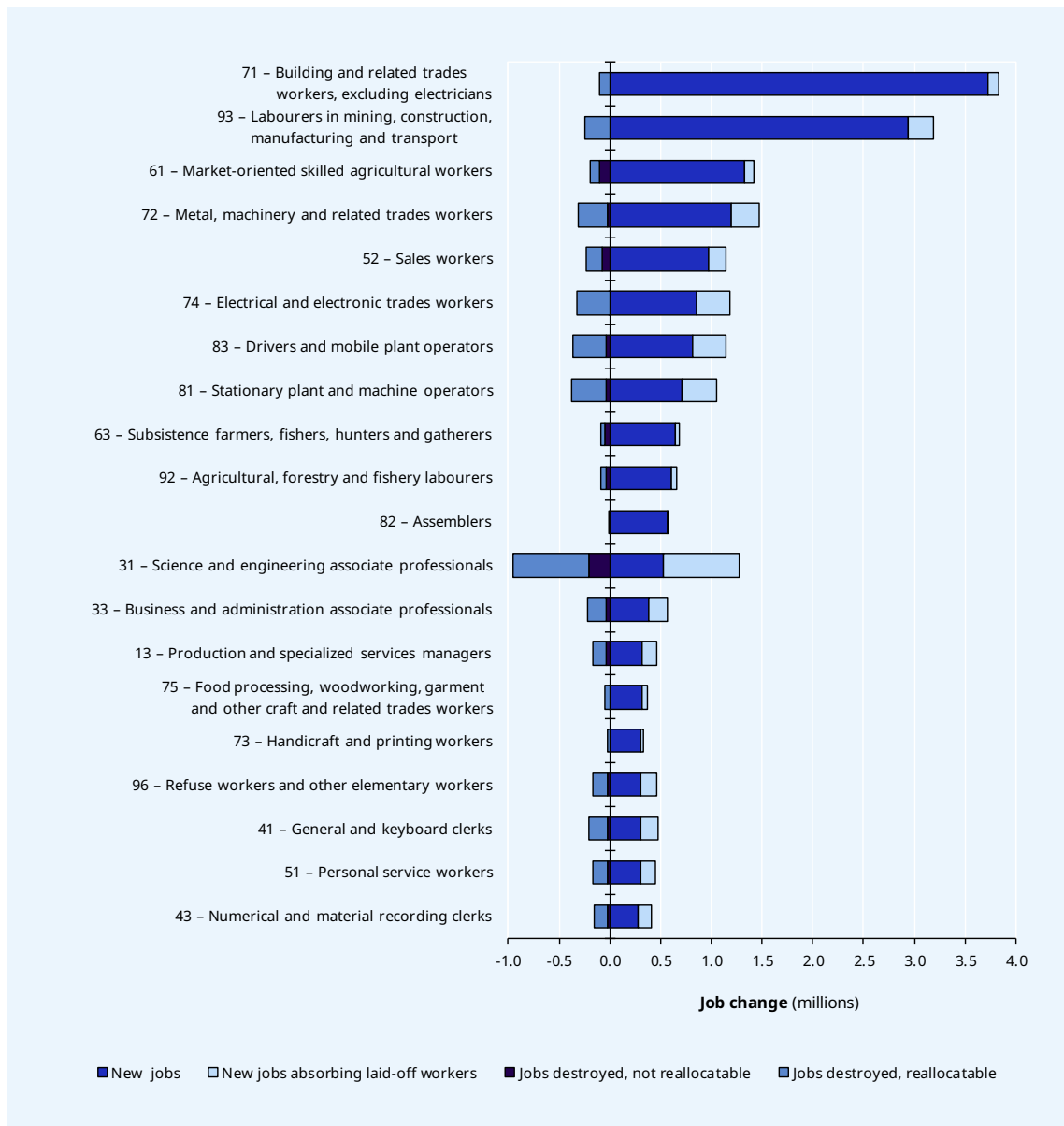
²⁵ ILO, “COVID-19: Impact on Trade and Employment in Developing Countries”, 2020.

²⁶ A “circular economy” is a model for sustainability in resource use and consumption that supports moving away from an extract-manufacture-use-discard model and embraces the recycling, repair, reuse, remanufacture, rental and longer durability of goods; see ILO, *World Employment and Social Outlook 2018: Greening with Jobs*, 2018.

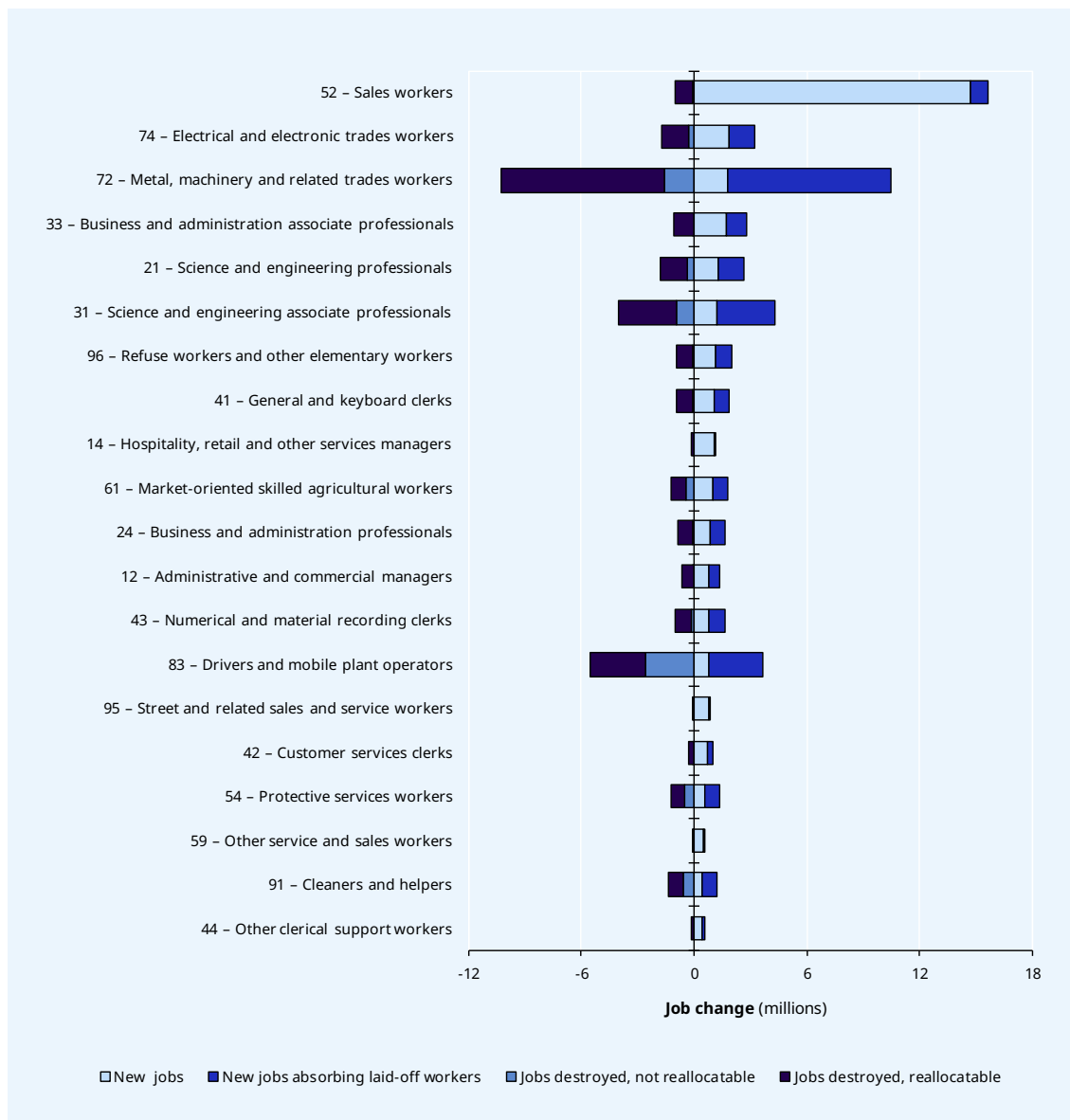
²⁷ ILO, *Skills for a Greener Future: A Global View*, 2019; *Skills for a Greener Future: Key Findings*, 2019.

► **Jobs created and destroyed by occupations most affected in two global scenarios, 2030**

► **Figure 4(a). Energy sustainability scenario** (Difference in employment between the sustainable energy scenario (2°C scenario) and the business-as-usual scenario (6°C scenario) of the International Energy Agency by 2030), by occupation (ISCO-08)



► **Figure 4(b). Circular economy scenario** (Difference in employment between the sustained 5 per cent annual increase in recycling rates for plastics, glass, pulp, metals and minerals across countries and related services scenario and the business-as-usual scenario (6°C scenario)), by occupation (ISCO-08)



Source: ILO, *Skills for a Greener Future: A Global View*, 12 December 2019.

32. The pandemic has added to the ongoing restructuring processes, drawing attention to the need for the adoption of more sustainable practices to mitigate similar crises in future. Companies in some countries have already been reskilling workers in emerging technologies as part of the broader energy transition and these efforts have been accelerated in light of the recent crisis. TVET systems need to be involved in efforts to support this green and digital transition, such as by participating in green stimulus recovery packages with reskilling and upskilling measures.

Demographic changes

- 33.** Demographic changes profoundly affect the structure of the labour force and constitute an important challenge for skills policies. The global population is expected to grow by 10 per cent by 2030,²⁸ with 60 per cent of the increase expected to occur in developing countries, in particular sub-Saharan Africa and Southern Asia, where educational attainment is lagging behind.²⁹ These shifts are a major challenge for job creation and providing access to relevant education and training for young cohorts in these regions, as the growing workforce and lack of equal access to education are combining to create a surplus of low-skilled workers and a shortage of medium-skilled workers. However, population growth is both a challenge and an opportunity given the potential of young and innovative workers.³⁰ The capacity of developing countries to translate the demographic dividend into growth and development will depend to a certain extent on investment in high-quality education and training coupled with decent jobs creation.
- 34.** Developed economies face the opposite trend of ageing populations. The proportion of the population over 60 is expected to increase from 10 per cent in 2000 to 21.8 per cent in 2050, creating a major challenge for the sustainability of social security systems.³¹ Ageing will influence skills demand in sectors in which training opportunities have increased during the COVID-19 pandemic situation, such as the care economy. Labour shortages, which are often associated with skills shortages, are already being felt in many advanced and ageing economies and in the coming decades they are expected to become significant in many middle-income countries. Older workers will be under pressure to upgrade their digital and technology-related skills to remain employable and will need to reskill and upskill in response to fast-changing labour market needs and evolving skills gaps and mismatches. This will increase the importance of integrating digital and transferable skills in skills development and removing barriers to learning for adults.
- 35.** COVID-19 has and will continue to have a serious impact on the ability of young people and adults to access skills training and lifelong learning opportunities. Young people in education and training on their way into the labour market were seriously impacted by the disruption of their studies. One in six young people who were in work before the pandemic are no longer working. Others have seen their working hours fall by 23 per cent.³² Women were hit hardest by the pandemic, as a result of being over-represented in the more affected sectors and frontline occupations responding to the pandemic. Older workers were also in a particularly vulnerable situation, not only because of the elevated health risks but because of the need to upgrade their digital skills when teleworking and online learning were introduced.
- 36.** The recovery process needs to embody a transformative agenda that ensures access to relevant skills development that supports the transition of young people to employment and addresses the needs of women, lower-skilled workers and other disadvantaged and vulnerable groups.

²⁸ UN, *World Population Prospects 2019: Highlights*, 2019; *Report of the Secretary-General on SDG Progress 2019*, 2019.

²⁹ MGI, *Jobs Lost, Jobs Gained*.

³⁰ Global Commission on the Future of Work, *“Skills Policies and Systems for a Future Workforce”* (ILO, 2018).

³¹ ILO, *Employment and social protection in the new demographic context*, ILC.102/IV (2013).

³² ILO, *“COVID-19 and the World of Work”*, concept note for the Global Summit, 1–9 July 2020.

Access to skills for workers in diverse forms of work arrangements

37. In recent years, cross-border production and factors linked to new technology have led to diverse forms of work organization, including work arrangements in the platform and gig economy. Evidence suggests that firms which rely heavily on these forms of employment (such as temporary employment) are less likely to offer training to workers in these diverse forms of work arrangements.³³ In addition, 70 per cent of all workers globally are either self-employed or work in micro or small enterprises less likely to invest in skills development, often due to financial constraints.³⁴ Similarly, self-employed workers in the “platform” and “gig” economy tend to have limited access to training opportunities. Promoting learning for such workers will require financial and non-financial incentives targeting both employers and workers, irrespective of employment status and contractual arrangements.
38. The COVID-19 pandemic posed a number of new challenges for workers due to lockdowns and remote working. Recent analyses have shown that close to one third of jobs in European Union (EU) countries and other advanced economies could be performed remotely. This has been a significant development as working arrangements in many sectors, relying on physical proximity, are changing.³⁵
39. Modern approaches to work organization at the enterprise level are being driven by new business models that emphasize high performance practices, continuous improvement and greater worker autonomy and involvement through mechanisms such as teamwork, workers’ voice and problem-solving.³⁶ These approaches can foster skills development and utilization in the workplace, but are not without constraints and thus can be associated with decent work deficits. Promotion of decent work requires certain enabling conditions³⁷ alongside equitable access to skills development for all categories of workers, with particular emphasis on assisting disadvantaged groups who lack such access to adapt to the new ways of working and develop the core skills they need.³⁸

Intensified labour migration

40. A shortage of skilled labour is one of the key “pull factors” of international migration, along with better pay and working conditions and greater job and career opportunities. These operate alongside “push factors”, including violence, conflict, poverty and political instability in countries of origin. Well-governed labour migration can balance labour supply and demand, help develop and transfer skills at all levels and contribute to sustainable development for countries of origin, transit and destination.³⁹ In recent years, the number of migrant workers has increased from 150 million to 164 million.⁴⁰
41. However, without adequate supporting mechanisms, labour migration can give rise to decent work challenges. The ILO’s analysis of qualification mismatch among immigrants to

³³ ILO, *Non-Standard Employment Around the World: Understanding Challenges, Shaping Prospects*, 2016.

³⁴ ILO, *Small Matters: Global Evidence on the Contribution to Employment by the Self-Employed, Micro-Enterprises and SMEs*, 2019.

³⁵ CEDEFOP, “Briefing Note: Online Working and Learning in the Coronavirus Era”, 2020.

³⁶ ILO and WTO, *Investing in Skills*.

³⁷ ILO, *Business Models for Decent Work*, 2019.

³⁸ Global Commission on the Future of Work, *Skills Policies and Systems*.

³⁹ ILO, Provisional Record No. 12-1, *ILC106-PR12-1* (2017).

⁴⁰ ILO, *ILO Global Estimates on International Migrant Workers: Results and Methodology*, 2018.

European countries in comparison to workers already resident in those countries has highlighted the vulnerable position that immigrants typically have in labour markets.⁴¹ High levels of overqualification among migrants are partly the result of a lack of recognition of their skills. Improving ways of validating and recognizing prior learning and establishing adequate skills development programmes, including WBL and apprenticeships, could avoid the risk of “brain waste” and underutilization of skills and help migrants find jobs that match their skills and integrate in the labour market.⁴² This is particularly important for high-income countries, where two thirds of the global population of migrant workers are located.⁴³

42. For countries of origin, the outflow of working-age high-skilled workers known as “brain drain” is a key concern: their challenge is how to retain talent, use their skills upon return and create decent work opportunities.
43. Migrants are particularly exposed to the health and economic effects of the pandemic, due to their vulnerability and occasional over-representation in frontline jobs.⁴⁴ In addition, the pandemic has affected the operations of training centres and validation authorities in host countries, which have reduced some training and upskilling opportunities and skills recognition services.

The impact of COVID-19 on the world of work and skills development

44. The coronavirus pandemic has already become an important factor influencing economic activity, employment and human security, in addition to posing threat to public health and life. About 93 per cent of the world’s workforce reside in countries with workplace closures of some sort. In 2020, losses in working hours were 8.8 per cent compared to the fourth quarter of 2019, equivalent to 255 million full-time jobs. The most severe impact on working hours and employment has been observed in four sectors, in particular: accommodation and food services; manufacturing; wholesale and retail trade; and real estate and business activities.⁴⁵ Working hours and employment losses were also observed in other sectors, such as construction; transportation and storage; communication; and agriculture, forestry and fishing, albeit on a relatively smaller scale.⁴⁶ Enterprises, especially micro, small and medium-sized enterprises that have few reserves to overcome short periods of inactivity, face great uncertainty. Employers and workers in priority economic sectors require special support and attention to address skill needs so that they can rebuild with a more highly skilled workforce.⁴⁷
45. The crisis has uncovered huge decent work deficits and aggravated existing inequalities. The most vulnerable people before the pandemic have been hardest hit and have the greatest need of new skills and learning opportunities to help them find work. Unemployment and vulnerability, already highly challenging for some regions and large population groups (women, youth, informal workers, migrants and refugees, among many others) are extending beyond pre-crisis levels and are leading to increased inequality and

⁴¹ Theo Sparreboom and Alexander Tarvid, *Skills Mismatch of Natives and Immigrants in Europe* (ILO, 2017).

⁴² ILO and OECD, *Global Skills Trends*.

⁴³ ILO, *Global Estimates on International Migrant Workers*.

⁴⁴ OECD, *International Migration Outlook*, 2020.

⁴⁵ ILO, “ILO Monitor: COVID-19 and the World of Work: Seventh Edition”.

⁴⁶ ILO, “ILO Monitor: COVID-19 and the World of Work: Seventh Edition”.

⁴⁷ ILO, “ILO Monitor: COVID-19 and the World of Work: Seventh Edition”.

poverty. Currently, 2 billion people are engaged in the informal economy and most of them live in low- and middle-income countries; 1.6 billion of them face an imminent threat to their livelihoods⁴⁸ following the 60 per cent drop in average income in the first month of the pandemic. Millions of low-paid and low-skilled workers face a dramatic decline in working hours, wage cuts and layoffs, partly because of the lack of options to work remotely or limited digital skills and internet connectivity. Providing reskilling and upskilling opportunities, as part of job-retention and employment stimulus packages and long-term comprehensive recovery programmes, is a key measure that could mitigate such effects.

- 46.** Training and education have been disrupted massively due to lockdowns, limiting conventional face-to-face skills provision and placing additional pressures on teachers and trainers. Social inequalities and budget cuts are expected to adversely impact skills development opportunities. The pandemic has caused the full or partial closure of education and training institutions and centres across the world, with 1.6 billion students in about 200 countries impacted.⁴⁹ Many teachers, trainers and learners are confined to their homes without access to the internet or technical devices and a suitable space to teach and learn. The United Nations Educational, Scientific and Cultural Organization (UNESCO) estimates that an additional 24 million students across 180 countries will be at risk of not returning to education institutions in 2020.⁵⁰ The impact of school closures is likely to be highest in countries already achieving poor learning outcomes, low completion rates and low resilience to shocks. Some 50 per cent of learners experience delays in finishing their courses and 10 per cent doubt they will be able to complete them at all.⁵¹ The transition to the labour market is uncertain for those leaving education now. The evident danger is of a “lockdown generation” in the making and a stagnation in achieving SDG 4 on quality education and lifelong learning.⁵²
- 47.** For TVET, there is evidence that the major challenge for institutions has been to remain operational and find solutions for practical training. Preliminary results from ILO research show that in April 2020, 30 per cent of TVET institutions ceased operations completely. Most TVET programmes, including in the sectors of tourism, engineering and construction, have found it very difficult to continue practical skills training. Even where compensatory measures were implemented, their effect has been limited and constrained by the absence of digital and distance-learning content and capacity. Most online courses and learning modules available have not been developed for TVET,⁵³ which is expected to affect both motivation and potential dropout rates. As some TVET institutions are also taking part in national crisis response measures, producing sanitizers and protective equipment or supporting health and elderly care, the increased COVID-19 risk for teachers, trainers and other educational staff should be addressed, as well as the lack of training on safety and health at work.

⁴⁸ ILO, “[Extending Social Protection to Informal Workers in the COVID-19 Crisis: Country Responses and Policy Considerations](#)”, 2020.

⁴⁹ ILO CINTERFOR, “[The Role of Vocational Training in Confronting the Effects of COVID-19 in Latin America](#)”, 2020.

⁵⁰ UNESCO, “[Concept Note](#)”, 2020 Global Education Meeting, 20–22 October 2020.

⁵¹ ILO, “[COVID-19 and the World of Work](#)”, concept note.

⁵² ILO, “[COVID-19 and the World of Work](#)”, concept note; UNESCO, “[Concept Note](#)”.

⁵³ Kaliopé Azzi-Huck and Tigran Shmis, “[Managing the Impact of COVID-19 on Education Systems Around the World: How Countries are Preparing, Coping, and Planning for Recovery](#)”, *World Bank Blogs* (blog), 18 March 2020; European Commission, “[EC Survey on Addressing the COVID-19 Emergency as VET Providers and Policy Makers](#)”, 3 April 2020.

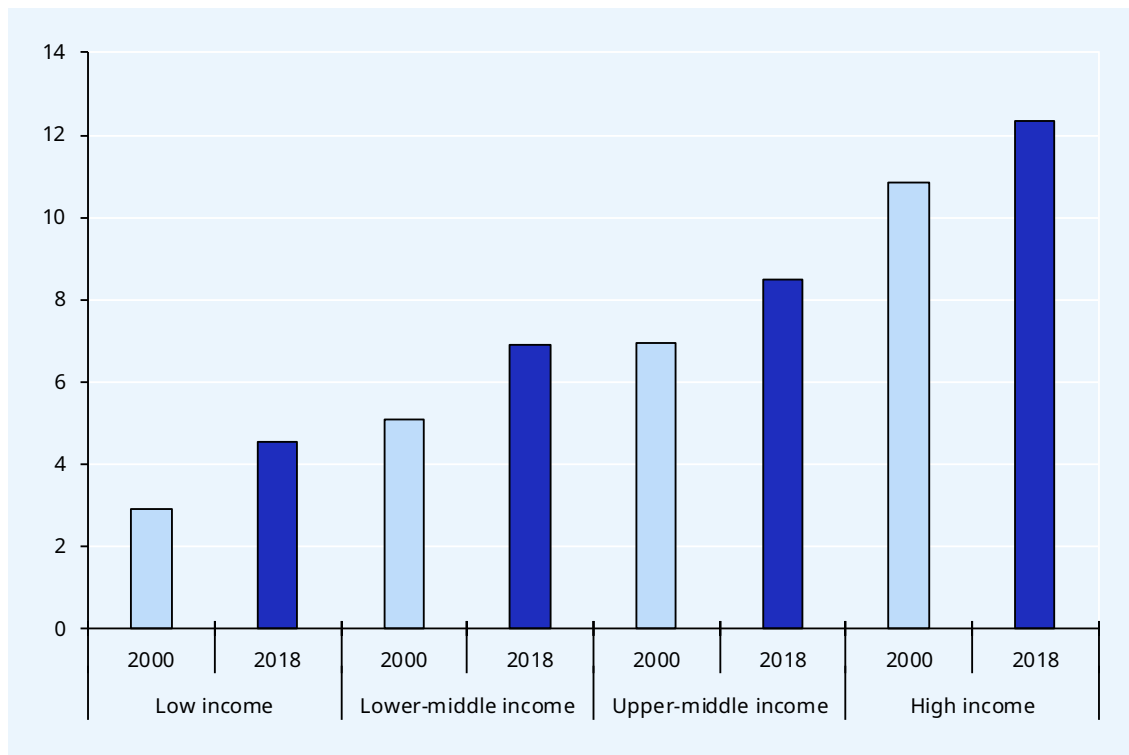
48. The widespread use of digital learning practices varies by level and segment of education and skills systems. Combined with school closures, this has raised concerns about equity, inclusion and the reinforcement of existing inequalities. The “digital divide” risks widening the gap in academic achievement as low-income households are less able to provide the equipment, resources, tools and environment required for effective online learning.
49. Given its health, humanitarian and socio-economic dimensions, the pandemic is likely to have profound and lasting effects on the future of work and on education and skills development. Yet the need for skilling, reskilling and upskilling in view of the accelerated structural economic and digital shifts will be greater than before, especially in the most affected sectors. Comprehensive policy responses – including fiscal recovery measures, active and passive labour market policies and social protection – will be needed to address the impacts of the pandemic on opportunities for decent life and work, promoting lifelong learning and a quality education for all, and reskilling and upskilling. While labour markets and the demand for skills have been seriously disrupted, there remain clear priorities for investment that may help to put people back to work, including green, digital and core skills and occupational safety and health and skills for the care economy.

1.2. Delivery and relevance of skills: A snapshot

Access to training and educational attainment

50. Education, skills development and TVET are key to the 2030 Agenda, under SDG 4 on ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all and SDG 8 on promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
51. Worldwide, the steady increase in educational attainment and years of schooling is a positive sign of progress in terms of access to education (figure 5).

► **Figure 5. Mean years of schooling by income group**



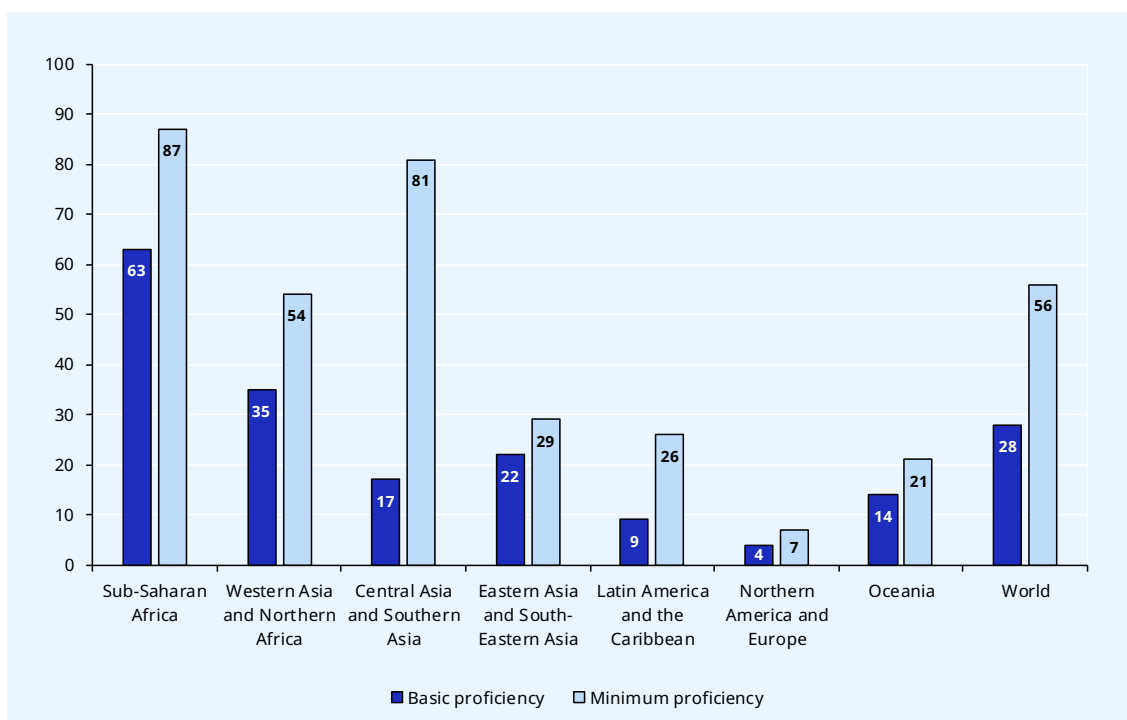
Note: The average by income group is weighted, i.e. the population size of each country has been taken into account when calculating the average by income group.

Source: UNDP, data set used for computing the human development index.

- 52.** However, the targets of SDG 4 are far from being achieved with respect to the quality and inclusiveness of education and training.⁵⁴ More than half of the world's children and adolescents do not meet minimum proficiency standards in reading, with sub-Saharan Africa facing the biggest gap (figure 6), which is a major impediment to subsequent learning and skills development.

⁵⁴ UNESCO, “#CommitToEducation Social Media Pack”.

► **Figure 6. Proportion of students not reaching basic and minimum proficiency levels in reading, by region**



Note: The minimum level is higher than the basic level of proficiency. Hence, the number of children who do not achieve the minimum proficiency level is greater than the number of children who do not achieve the basic level.

Source: UNESCO Institute for Statistics, 2018.

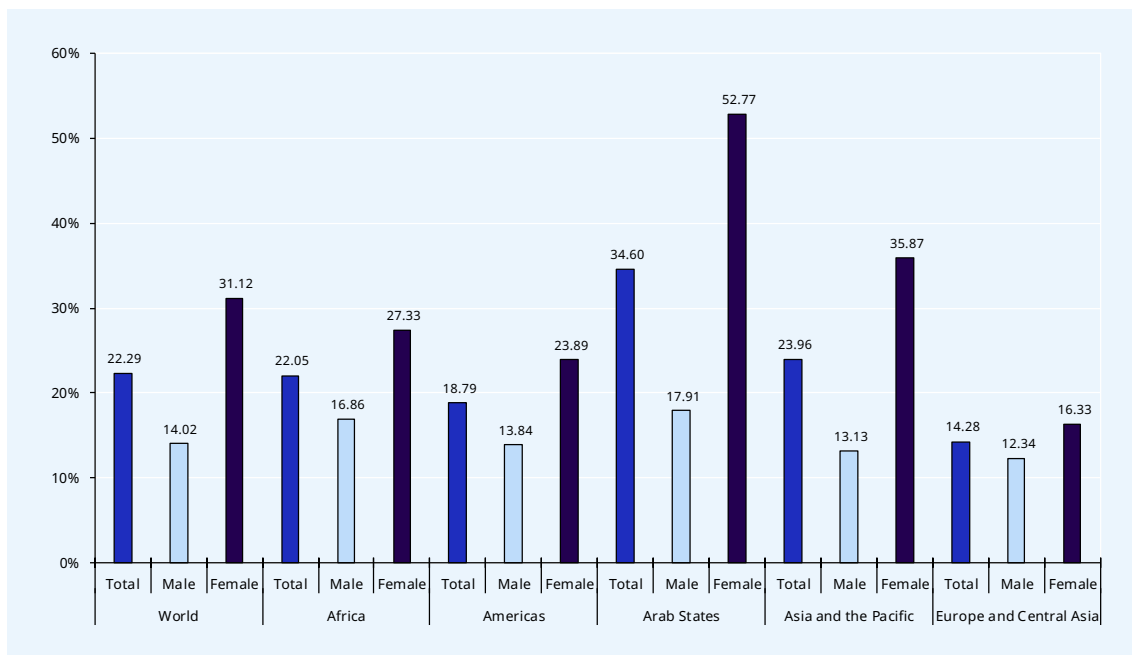
- 53.** In addition, despite the considerable reduction of gender inequality in education in recent decades, the female-to-male ratio in average length of schooling is still significantly lower in developing countries (85.9 per cent) than in advanced countries (97.8 per cent).⁵⁵ Although comparable statistics on skills development are limited owing to the lack of data and system differences across countries, female participation in vocational education is reported to have dropped from 45 per cent in 2007 to 43 per cent in 2017 and continues to be significantly lower than male enrolment rates.⁵⁶ In addition, two-thirds of the world's illiterate people are women.⁵⁷
- 54.** The lack of relevant education and training and decent work opportunities hinder more than one in five young people globally from developing skills or entering the labour market. Young people falling into this category are particularly vulnerable since their lack of education and/or professional experience make them less employable and more exposed to informal employment and working poverty. At both global and regional levels, the female share of young people not in education, employment or training (NEETs) is consistently greater than the male share, owing to the generally higher dropout rates among women in developing countries and their generally higher inactivity rates globally, contributing to persistent gender inequalities (figure 7).

⁵⁵ Global Commission on the Future of Work, *Skills Policies and Systems*.

⁵⁶ UNESCO, *Global Education Monitoring Report, 2017/2018: Accountability in Education: Meeting our Commitments*, 2017.

⁵⁷ UNESCO, "Learn to Lead: Educated Girls Can Do Anything", 2018.

► **Figure 7. Share of young people not in employment, education or training, by sex and broad region (percentages, 2019)**

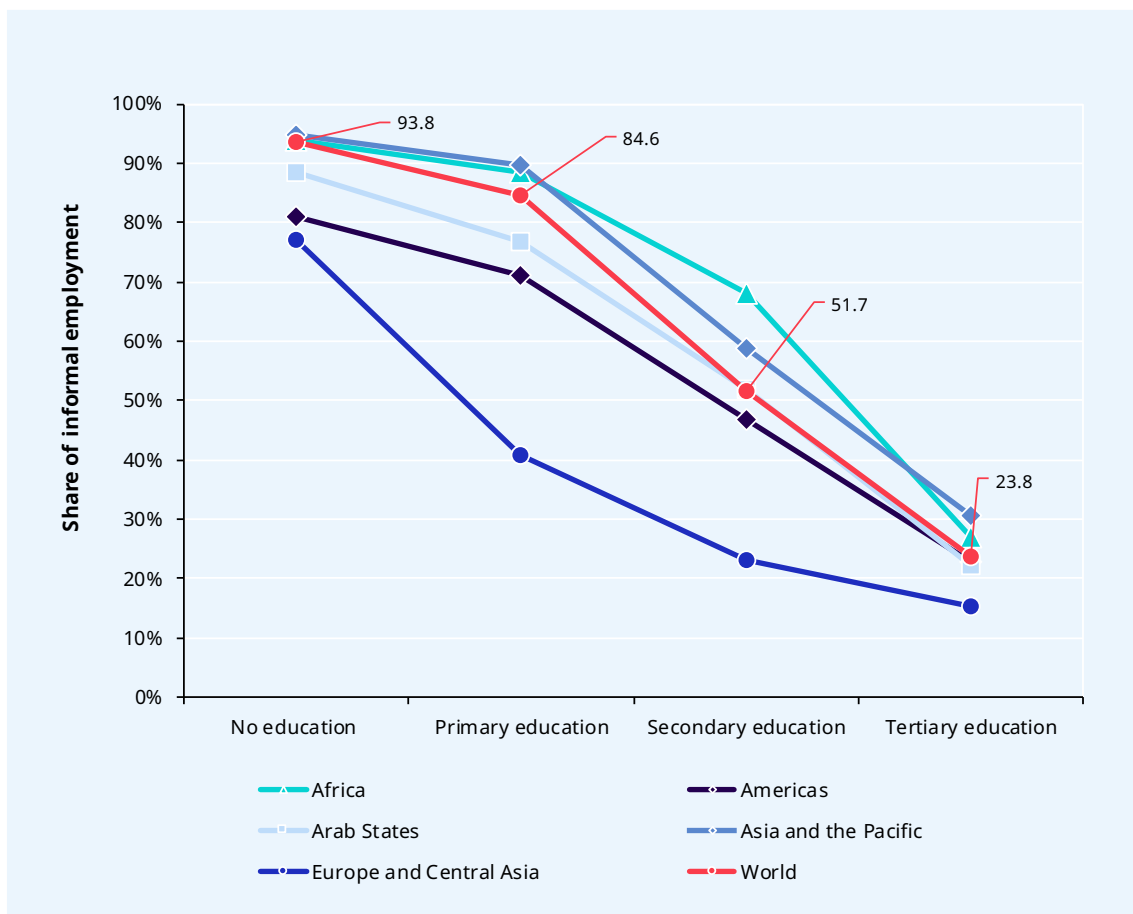


Source: ILOSTAT, ILO modelled estimates, November 2020.

- 55.** Lower levels of education are also strongly correlated with informal employment (figure 8). For the majority of young (and older) people in developing countries, the informal economy represents the main source of work and livelihood: nine in ten young workers in many low-income countries work in the informal economy.⁵⁸ At the same time, the limited availability of formal employment opportunities in developing countries might result in lower returns on investment in training.

⁵⁸ Robert Palmer, "Financing Technical and Vocational Skills Development Reform", *Handbook of Vocational Education and Training*, ed. Simon McGrath et al. (Springer, 2018): 433–454.

► **Figure 8.** Share of informal employment in total employment, by level of education (percentages, 2016)



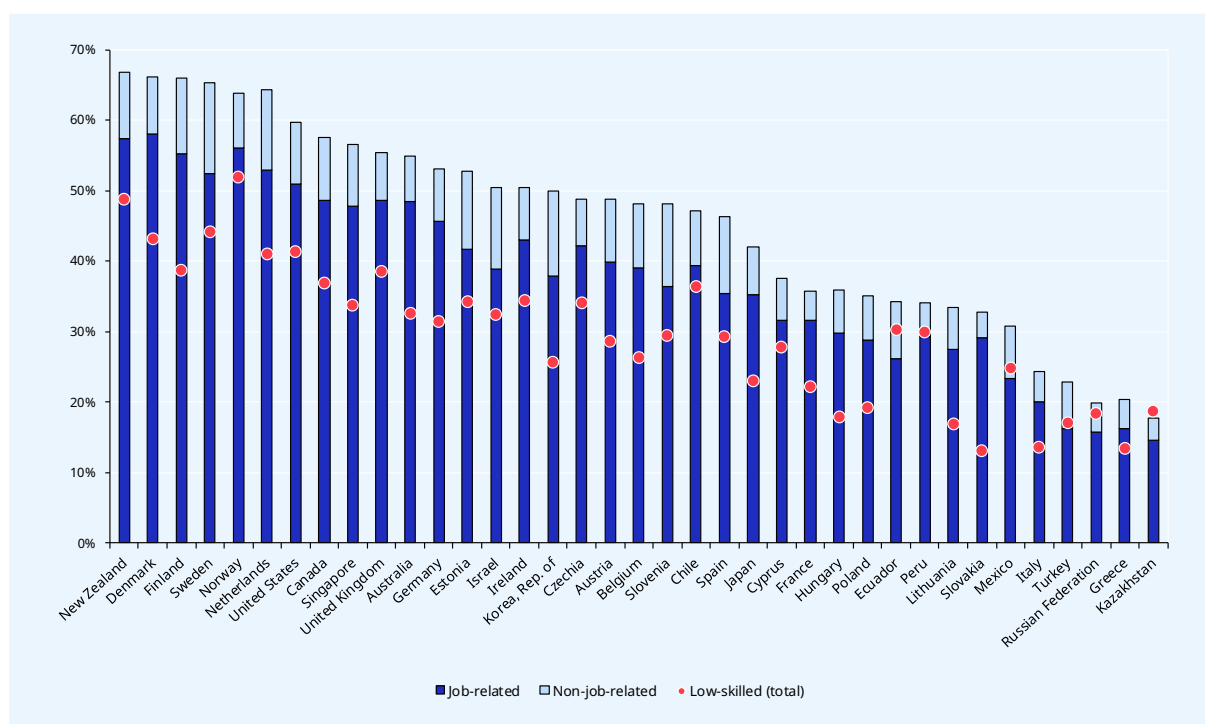
Source: ILO, *Women and Men in The Informal Economy: A Statistical Picture*, 2018.

- 56.** Rapid labour market changes imply multiple school/training-to-work and work-to-work transitions. Acquiring a single lifetime qualification through initial training is no longer sufficient as jobs continue to change and one job for life is no longer valid for many occupations and in many sectors. Despite the global recognition of the importance of lifelong learning through the Education 2030 Framework for Action,⁵⁹ implementation remains weak due to lack of operational and practical guidelines, especially when it comes to adult learning. Some 750 million adults – two thirds of them women – remained illiterate in 2016. Half of the global illiterate population live in South Asia and a quarter in sub-Saharan Africa.
- 57.** Among the countries covered by the Organisation for Economic Co-operation and Development (OECD)/Programme for the International Assessment of Adult Competencies (PIAAC) Survey of Adult Skills, the share of adults participating in training ranges from 67 per cent in New Zealand to just 18.2 per cent in Kazakhstan. However, even in the best-performing countries for which data is available, the level of participation in training of low-skilled workers is extremely low⁶⁰ (figure 9).

⁵⁹ UNESCO, *3rd Global Report on Adult Learning and Education*, 2016.

⁶⁰ ILO and OECD, *Global Skills Trends*.

► **Figure 9. Incidence of training among adults in selected countries, by skills level (percentages, year prior to survey)**



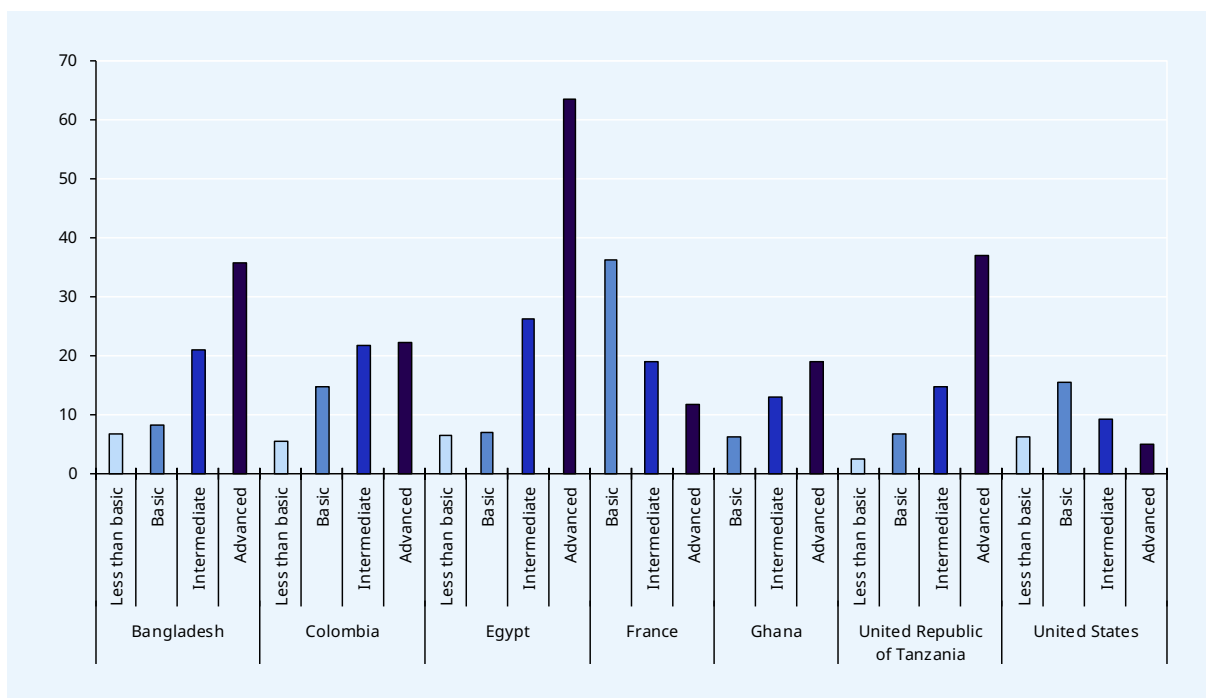
Note: Percentages are of adults who participated in adult education and training during the year prior to the survey (rounds: 2011–12, 2014–15, 2017–18), relative to the total population aged 16 to 65, excluding young people aged 16–24 in initial cycle of studies.

Source: OECD/PIAAC, “Survey of Adult Skills”.

Skills mismatch

58. More and better education does not necessarily lead to better job opportunities. Increasing enrolments and completion rates for upper secondary and tertiary education can only bring significant benefits for economies and societies if employment opportunities are created to absorb graduates and make good use of available knowledge and skills. In advanced economies, young people with higher levels of education show better employability, whereas in low- and middle-income countries, their likelihood of being unemployed is in fact higher than those with lower levels of educational attainment (figure 10). Returns on investments in education and training are low in those countries, either because the creation of decent jobs does not catch up with the supply of skills or because the qualification structure of graduates does not match the demand.

► **Figure 10. Youth unemployment rate by broad level of education, selected countries, latest year available**



Note: Youth is defined here as the population aged 15–24, with the exception of the United States (population aged 16–24); years considered: Bangladesh (2017), Colombia (2019), Egypt (2018), France (2019), Ghana (2017), United Republic of Tanzania (2014), United States (2019).

Source: ILOSTAT.

59. In 2019, 54 per cent of employers could not find the right set of skills,⁶¹ while an estimated 187 million people worldwide were without work,⁶² pointing to persistent skills mismatches (box 1).

► **Box 1. Changing business and opportunities for employer and business organizations**

A survey conducted in 2019 among 500 executives in 15 countries identified skills as a fifth mega driver and highlighted the following:

- A large proportion of businesses in the United States of America (61 per cent), Brazil (70 per cent), India (66 per cent) and Germany (65 per cent) agreed that businesses are looking for different skills in new recruits than three years ago. Similarly, executives in the Plurinational State of Bolivia (60 per cent), Haiti (53 per cent), China (47 per cent), South Africa (51 per cent) and Malaysia (63 per cent) agreed that it is becoming harder to recruit people with the skills needed.
- Some 78 per cent of executives indicated that updating the school and education curriculum to match the economy's needs would provide them with the skilled employees they require. This sentiment is particularly strong in emerging markets, rising to 79 per cent of respondents in Latin America and 86 per cent in Africa.

⁶¹ Manpower Group, "The Talent Shortage", 2019.

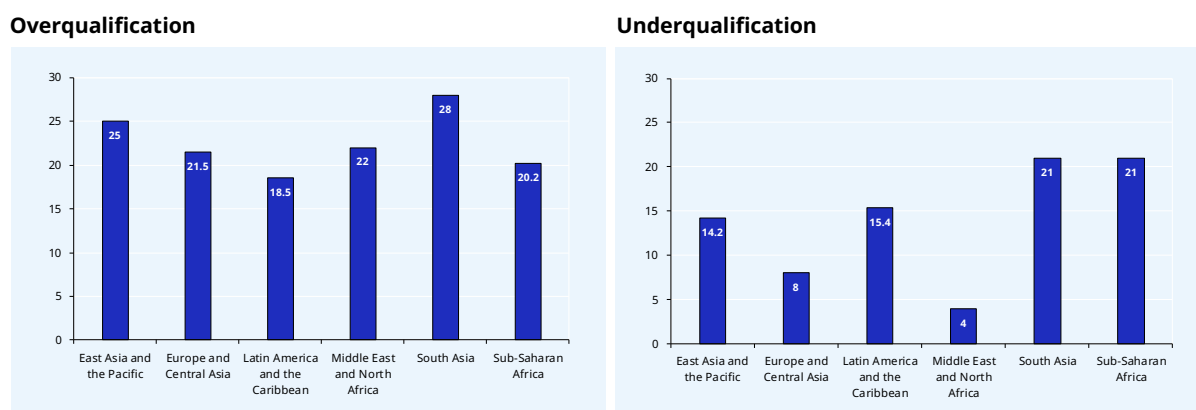
⁶² ILO, *World Employment and Social Outlook: Trends 2019*, 2019.

- Small and medium-sized enterprises (SMEs) are the most active supporters of changes in the skills agenda, with 84 per cent of small businesses supporting updating education systems to meet skills needs.¹

¹ IOE/ILO, *Changing Business and Opportunities for Employer and Business Organizations*, 2019.

- 60.** Skills mismatch – an imbalance between skills demand and skills supply – can take different forms, such as a vertical mismatch (overqualification or underqualification); a horizontal mismatch (mismatch by field of study or job); over-skilling or under-skilling; skills gaps; skills shortages; or skills obsolescence.⁶³
- 61.** In a recent survey of OECD countries, more than one in four adults reported a mismatch between their current skills sets and the qualifications required to do their jobs.⁶⁴ Skills mismatches tend to be more prevalent in developing and emerging countries.
- 62.** Recent ILO research in more than 50 low- and middle-income countries shows that while underqualification is a much bigger issue in developing countries, especially in sub-Saharan Africa and South Asia, overqualification is also an issue for them. Both types of mismatch are widely present in all regions (figure 11).⁶⁵

► **Figure 11. Overqualification and underqualification in low- and middle-income countries**



Note: Cumulative calculation of different surveys.

Source: ILO, *Skills and Jobs Mismatches*.

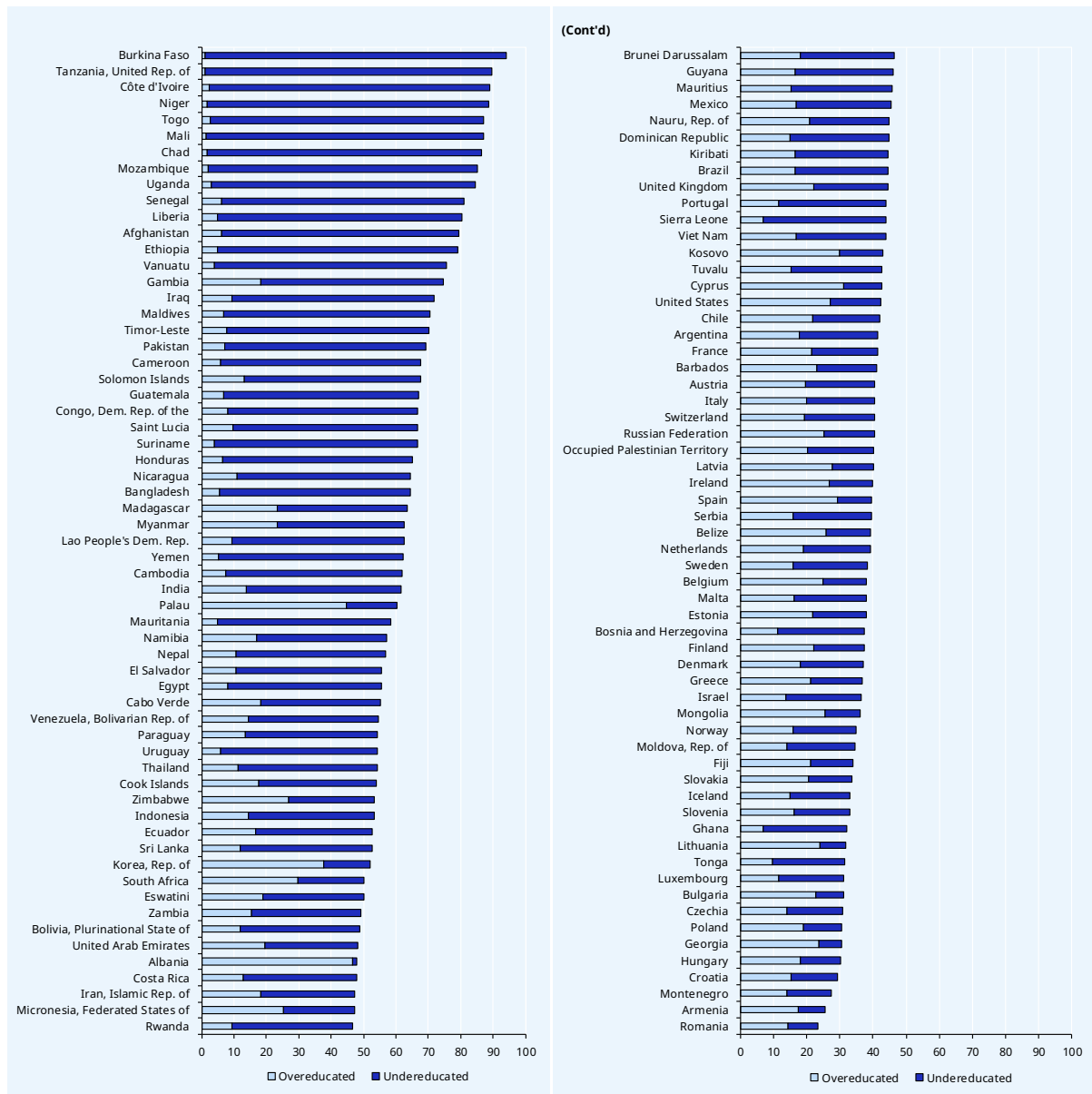
- 63.** The share of qualification mismatch in employment in selected countries ranges from about 30 to almost 90 per cent (figure 12). The incidence is higher in countries with lower levels of development and education and higher levels of self-employment and informal employment.

⁶³ Seamus McGuinness et al., *How Useful is the Concept of Skills Mismatch?* (ILO, 2017).

⁶⁴ WEF, *Towards a Reskilling Revolution*.

⁶⁵ ILO, *Skills and Jobs Mismatches in Low- and Middle-Income Countries*, 2019.

► Figure 12. Share of qualification mismatch in employment, selected countries



Note: 2019 or the latest available year after 2010; normative approach calculated based on International Standard Classification of Occupations (ISCO) educational requirements, by 1-digit ISCO code.

Source: ILOSTAT.

64. The primary causes of underqualification include lack of decent jobs to attract higher qualified workers, low levels of educational attainment and lack of access to education and training. Overqualification results from low levels of labour market demand, such as scarce availability of decent and skill-intensive jobs and lack of formal employment opportunities.
65. All types of skills mismatch are associated with negative outcomes in the labour market: lower job and life satisfaction, loss in private and public returns on investment in training, loss in firms' productivity, increased hiring costs, suboptimal work organization and higher staff turnover.⁶⁶ The wage penalties of overqualification are generally higher in developing

⁶⁶ ILO, *Skills and Jobs Mismatches*.

countries than in advanced countries and are greater for female than male workers, which may be partly explained by the high level of informality and lack of regulation of the labour market.

► Chapter 2

Understanding skills and lifelong learning and their social benefits in times of change

2.1. Understanding the terms

66. International labour standards and other ILO instruments and documents recognize that education, training and lifelong learning are contributing factors in personal development, access to culture and active citizenship (box 4).
67. Moreover, since decent work for all is a primary objective of the ILO, education and training are considered essential for all people and contribute to the achievement of full employment, poverty eradication, social inclusion and sustained economic growth in the global economy (box 2).

► Box 2. VET and lifelong learning in key normative documents of the ILO

Convention No. 142, one of the most significant ILO instruments (see Appendix II) and ratified by 68 Member States, states that VET policies and programmes should “improve the ability of the individual to understand and, individually or collectively, to influence the working and social environment” and “encourage and enable all persons, on an equal basis and without any discrimination whatsoever, to develop and use their capacities for work in their own best interests and in accordance with their own aspirations, account being taken of the needs of society”.

Recommendation No. 195 includes the following definitions:

- (a) the term *lifelong learning* encompasses all learning activities undertaken throughout life for the development of competencies and qualifications;
- (b) the term *competencies* covers the knowledge, skills and know-how applied and mastered in a specific context;
- (c) the term *qualifications* means a formal expression of the vocational or professional abilities of a worker which is recognized at international, national or sectoral levels;
- (d) the term *employability* relates to portable competencies and qualifications that enhance an individual's capacity to make use of the education and training opportunities available in order to secure and retain decent work, to progress within the enterprise and between jobs, and to cope with changing technology and labour market conditions.

68. Education and training, in particularly (T)VET systems, have evolved in response to structural changes in production systems, economies and societies. Together, these developments have shaped both the type of skills acquired and how they are delivered. Along with the more established terminology of VET or TVET, the terms “skills” and “skills development” have evolved, shifting the traditional focus of education and training beyond knowledge and facts towards building the behaviours and skills to apply knowledge to tasks, and thereby aligning the language of education and work ⁶⁷ (box 3).

⁶⁷ WEF, *Strategies for the New Economy: Skills as the Currency of the Labour Market*, 2019.

► **Box 3. The evolution of the terms “VET”, “TVET”, “skills” and “skills development”**

The term “VET” refers to “education and training that aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly in the labour market”.¹

The term “TVET” refers to education, training and skills development for a wide range of occupational fields, production sectors, services and livelihoods. TVET, as part of lifelong learning, can take place at secondary, post-secondary and tertiary levels and includes WBL and continuing training and professional development that may lead to qualifications. TVET also includes a wide range of skills development opportunities in national and local contexts. Learning to learn, the development of literacy and numeracy skills, transversal skills and citizenship skills are integral components of TVET.²

The term “skills”, formerly defined as “the ability to apply knowledge and use know-how to complete tasks and solve problems”,³ has recently evolved into a more overarching term that refers to the ability to perform a task or a job, including the knowledge, competence and experience needed. Given current economic and labour market trends, the focus on the concept of skills is increasing, considering their more specific character, flexibility and even “fluidity” in terms of development, upgrading and updating and transferability, compared to the broader concept of qualifications, which refer to the formal expression of vocational or professional abilities, recognized at international, national or sectoral levels.⁴

The term “skills development” refers to the full range of formal and non-formal vocational, technical and skills-based education and training for employment or self-employment, including pre-employment and livelihood education and training; TVET and apprenticeships in both secondary and tertiary education; training for employed workers, including in the workplace; and employment-oriented and labour market-oriented short courses for those seeking employment.⁵

In many countries, the terms “skills development”, “VET” and “TVET” are used interchangeably. However, for the purposes of this report, the term “skills development” is a broader term that refers to all formal, non-formal and informal learning that has some labour market or broader societal utility.⁶

¹ CEDEFOP, *Terminology of European Education and Training Policy: A Selection of 130 Key Terms*, 2014. ² UNEVOC, “TVETipedia Glossary”. ³ UNEVOC. ⁴ ILO Recommendation No. 195. ⁵ See, for example, the broad understanding of training and skills development in ILO, *A Skilled Workforce for Strong, Sustainable and Balanced Growth: A G20 Training Strategy*, 2010. ⁶ In this report, the terms “VET” and “TVET” are retained when referred to in case studies and examples or cited from national or international sources.

69. The term “lifelong learning” has also evolved greatly since its emergence more than 100 years ago. During the second half of the twentieth century, it was mostly known for recognizing the role of adult learning or continuing education in addition to school education, TVET and higher education. The term began to assume a central role as a principle to prepare individuals to learn continuously over their life span during the policy debates in the 1990s after the release of the Delors report in 1996, which proposed the concept of “learning throughout life”. It gave equal weight to the concepts of “learning to know”, “learning to be”, “learning to live together” and finally “learning to do”, which recognized the value of learning and skills development for employment.⁶⁸

⁶⁸ ILO, *Lifelong Learning: Concepts, Issues and Actions*, 2019.

2.2. The future of work. What is new in terms of skills and lifelong learning?

70. In response to current challenging social and economic developments, there is a trend towards revaluing skills and strengthening the importance and broadening the scope of lifelong learning and skills development. Lifelong learning is increasingly seen as an important societal component and a key to the future of work.⁶⁹
71. The COVID-19 pandemic is expected to have a profound and potentially long-lasting impact. Hence it is important to rethink and widen the perspective on the importance of skills and lifelong learning while formulating “beyond-the-crisis” solutions to advance the ILO Centenary Declaration and the 2030 Agenda.

Placing people at the centre of the economic and social policies and business practices of the future: a human-centred approach

72. Unprecedented developments in science and technology are raising fundamental questions about the position and role of human beings in the future world of work. A human-centred approach puts the needs, aspirations and rights of people at the heart of all economic, social and environmental policies. Lifelong learning is key to a human-centred approach because it supports people in adjusting to change, thereby avoiding high social costs and maximizing the positive impacts of that change.
73. COVID-19 poses a direct potential threat to the well-being of every individual. Such a crisis can only be addressed by a large-scale human-centred agenda in which the first priority is to save lives and prepare a continuing health response, followed by a sustainable, inclusive and resilient long-term recovery strategy; policies and practices for stimulating the economy; protecting workers; and investing in quality and decent employment for developing individuals’ capacities and skills. Guided by the Centenary Declaration and with increased investments in people, we can transform our economies and societies to be more resilient and adaptable, helping workers and enterprises respond to unanticipated shocks more quickly and effectively as part of the efforts to build back better.

Strengthening people’s capacities and institutions of work and promoting decent work and sustainable growth

74. The Centenary Declaration’s human-centred approach requires strengthening the capacities of all people and the institutions of work, as well as promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
75. Quality lifelong learning for all, along with effective measures to support people through the transitions in their working lives, are important elements of such an approach, which should also reaffirm the employment relationship and take into account social dialogue, gender equality, social protection and fundamental rights. Policies and incentives that recognize and support the role of enterprises as generators of employment and that create an enabling business environment are important as well.
76. In today’s pandemic situation, policy solutions, stimulating the economy and employment, investing in people’s capabilities through skills and lifelong learning, active labour market

⁶⁹ ILO, “Lifelong Learning and the Future of Work: Challenges and Opportunities”, 2019.

policies and promoting sustainable enterprises are important measures for building back better.

Access to and investment in skills development and lifelong learning for all

77. Investing in people's capabilities is an important step towards implementing the human-centred approach to the future of work, which puts the needs, aspirations and rights of all people at the core of social, economic and environmental policies. In terms of skills development and lifelong learning, this approach will ensure that workers have the time and financial support they need to acquire and upgrade skills throughout their careers. Such an approach is supported by removing barriers to participation, widening access to learning, ensuring gender equality in learning and providing social protection and proactive employment services to make transitions possible (box 4).

► Box 4. Providing lifelong learning for all: Evolution in global debates on universal entitlement to lifelong learning

The Universal Declaration of Human Rights proclaims that "everyone has the right to education".¹ ILO Convention No. 142 provides in Article 4 that each Member shall gradually extend, adapt and harmonize its vocational training systems to meet the needs for vocational training throughout life of both young persons and adults in all sectors of the economy and branches of economic activity and at all levels of skill and responsibility. Recommendation No. 195 recommends that Member States "recognize that education and training are a right for all and, in cooperation with the social partners, work towards ensuring access for all to lifelong learning" (Paragraph 4). The International Covenant on Economic, Social and Cultural Rights views the right to fundamental education as not limited by age or gender.²

Realizing the importance of skills and lifelong learning, the global community and international organizations have begun to initiate concrete measures to realize the concept of "learning for all" and introduced it in policy agendas, initiatives or concrete financial instruments:

- The Global Commission on the Future of Work calls for the "formal recognition of a universal entitlement to lifelong learning".³
- The Education 2030 Framework for Action calls on countries to provide "lifelong learning opportunities for youth and adults".
- The European Pillar of Social Rights indicates that everyone has the right to quality and inclusive education, training and lifelong learning.⁴
- International organizations, including UNESCO and OECD, have identified learning entitlements as necessary elements of lifelong learning policies and systems.⁵
- The World Economic Forum promotes the concept of a "universal right to learn" which entails an annual allowance of "learning tokens" for skills training that is granted to every citizen over 16 years of age.⁶

¹ UN General Assembly, *Universal Declaration of Human Rights*, resolution 217A(III), 1948, Art. 26. ² UN General Assembly, *International Covenant on Economic, Social and Cultural Rights*, resolution 2200A (XXI), 1966, Art. 2. ³ ILO, Global Commission on the Future of Work, *Work for a Brighter Future*, 2019. ⁴ For a more elaborate discussion, see European Commission, *European Pillar of Social Rights: Building a Fairer and More Inclusive European Union*. ⁵ OECD, *Individual Learning Accounts: Panacea or Pandora's Box*, 2019. ⁶ Alexander De Croo, "Why We Need a Universal Right to Learn", *World Economic Forum Annual Meeting*, 19 January 2018.

78. Although the concept of learning entitlements is well established, its implementation in practice is still very limited or lacking in most cases. Challenges remain in order to ensure the application of the concept and develop the links with social protection. Some different approaches are being developed in terms of financing mechanisms, for example. A

universal entitlement to lifelong learning is understood as a guarantee of access to learning for all, based on established rights or legislation. However, in many cases where entitlements exist, coverage is not universal and is limited to specific groups in the labour market, such as through active labour market programmes (ALMPs) that target older workers or the unemployed. Universal entitlements to learning are more common in primary and secondary education systems, but with the exception of a very small number of countries, they rarely apply to skilling, reskilling and upskilling. For a system of universal lifelong learning entitlements to function effectively, key components such as comprehensive programme options and integrated financing mechanisms need to be in place.⁷⁰

- 79.** In these turbulent times that threaten human well-being, employment and career perspectives in unprecedented ways, increasing access to and participation in skills development is expected to receive a new impetus, including through the use of entitlement schemes.

Joint efforts and shared responsibilities

- 80.** A human-centred approach to the future of work calls for joint efforts and shared responsibilities of governments and employers' and workers' organizations on the basis of tripartism and social dialogue, taking into account national circumstances. Recommendation No. 195 calls on governments (by creating the conditions and investing in education and training), employers (by training their employees) and workers (by making use of the education, training and lifelong learning opportunities) to renew their commitment to lifelong learning. The Centenary Declaration specifically states that "promoting the acquisition of skills, competencies and qualifications for all workers throughout their working lives is the joint responsibility of governments and social partners" (Part II.A(iii)).

Lifelong learning at the core of a "learning society"

- 81.** In addition to investing in people and strengthening institutions, the global commitment to the 2030 Agenda and the SDGs calls for recognizing and leveraging education, training and lifelong learning to improve people's lives and contribute to individual and collective well-being. Skills and lifelong learning, which hold the key to the future of work,⁷¹ will become the foundation of "societal learning" as the driver for change and "the engine that sustains growth", as described below.⁷²

2.3. The transformative power of skills and lifelong learning

- 82.** ILO normative instruments, in particular Recommendation No. 195, highlight the role of education, training and lifelong learning policies, which: (a) emphasize sustainable economic development, the promotion of decent work, job retention, social development, social inclusion and poverty reduction; (b) stress the importance of innovation; (c) address the challenge of the informal economy; (d) promote investment in information and communications technology; (e) reduce inequality in education and training and

⁷⁰ UNESCO and ILO, "Lifelong Learning Entitlement Report", forthcoming.

⁷¹ UNESCO, "Domestic Financing in Education: A Smart Investment", 2018.

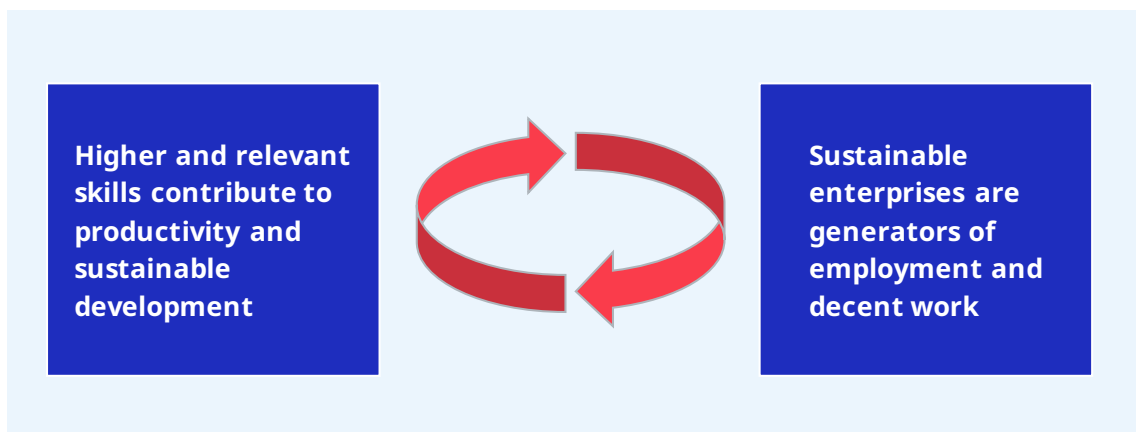
⁷² On "learning society" as an educational philosophy that positions education as the key for national development, see ILO, *Time to Act for SDG 8: Integrating Decent Work, Sustained Growth and Environmental Integrity*, 2019.

(f) strengthen social dialogue and collective bargaining on training as a basic principle for systems development, programme relevance, quality and cost-effectiveness. In recent years, in reaction to rapidly evolving global trends,⁷³ the collective work of ILO constituents has reinforced those recommendations and added new valuable elements to them, with a particular focus on social and environmental sustainability.⁷⁴

The virtuous circle: Skills for productivity that boosts employment, decent work and sustainable development

83. Shifting to a knowledge- or skills-based economy and fostering productive activities will accelerate the creation of more and better jobs, improve social cohesion and contribute to sustainable development, creating a virtuous circle, mediated by social dialogue, in which better, higher and relevant skills boost productivity and help modernize the economy, increase employability and ensure social inclusion and better work and life situations (figure 13). While megatrends influence skills needs and systems (as discussed in Chapter 1), investment in skills will ensure they can be converted into opportunities for individuals, enterprises and societies through the channels discussed below.

► **Figure 13. The virtuous circle between productivity and employment**



Skills as “accelerators” for technological advancement and innovation

84. As human capital is positively correlated with the overall level of adoption of advanced technologies and innovation, the level, quality and composition of skills determine society’s capability to master technologies and ensure they are used in an effective and inclusive way.⁷⁵ The supply of skills to invent, develop, apply, deploy and operate technologies, as well as to tailor their application to solve business, operational and government challenges, is one of the key enablers of technological change.

⁷³ See also ILO, *Skills for improved productivity, employment growth and development*, ILC.97/V (2008).

⁷⁴ ILO, *Time to Act for SDG 8*.

⁷⁵ ILO, *Skills for Improved Productivity*.

Skills for structural transformation and towards higher value added and dynamic growth sectors, including for SMEs

85. Globalization has opened up markets. Building capacity and knowledge systems induces and maintains structural transformations and development, economic diversification and competitiveness. Skills serve as a “buffer” that help workers and businesses to manage the potential negative impacts of labour reallocation among sectors and occupations and move to higher-value-added activities.

Skills for the transition to formality and to improve occupational safety and health and working conditions

86. In many developing countries, most workers remain in low-productivity employment, often in the informal sector with poor working conditions and little access to finance, markets, infrastructure, technology or training opportunities. Upgrading skills in the informal economy, in particular through improving informal apprenticeship systems and reducing skills mismatches, helps to move new entrants in the labour market directly into formal employment and facilitate the transition of workers and economic units from the informal to the formal economy. This requires functioning social dialogue mechanisms to promote the transition to formality and decent working conditions.
87. New entrants often lack sufficient training on work-related risks. Action is needed to better protect learners and workers by more effectively integrating training on occupational safety and health (OSH) in all programmes, through revision of training standards, course content and materials; enhancing competencies and skills of trainers in OSH (including at the workplace); building institutional capacity for OSH knowledge and information management and strengthening the role of employers’ and workers’ organizations in designing, implementing and monitoring these measures.

Skills beyond initial education and training

88. The demand for skilling, reskilling and upskilling will continue to evolve as individuals are required to undergo several job transitions throughout their working lives. For both workers and enterprises, this will mean recognizing the importance of contributing to and using the full range of lifelong learning options and continuous learning pathways. Training measures to support workers to become or remain active in the labour market may at least help to resolve labour and skills shortages in the long term. If adult workers do not have access to retraining opportunities, they may experience skills obsolescence, with impacts on productivity and innovation. Lifelong learning has a special role to play in providing opportunities for healthy ageing and the active participation of adults in social and economic development.

Skills for reducing inequalities and contributing to a just social transition to a future of work

89. The evidence shows that where education and skills are more equally distributed across the workforce, there tends to be less wage inequality.⁷⁶ A key priority for the future will be to enhance women’s uptake in TVET programmes related to science, technology, engineering,

⁷⁶ OECD, *Individual Learning Accounts*.

arts and mathematics (STEAM)⁷⁷ to support their employment in modern technology rich occupations with higher-wage pathways. In many countries, boys and girls continue to be steered into what society considers male and female fields and occupations. Training programmes with higher female participation more often correspond with lower-productivity jobs that confine women to lower-paid and lower-status job opportunities as a result of occupational segregation. A fairer distribution of “technological dividends” is another important issue that should be addressed in skill systems.

90. The above-mentioned gains that arise from skills development should be shared between enterprises and workers and benefit the whole society. While the benefits of globalization and technological change are widely shared, their costs are often shouldered by workers who lose their jobs or whose employment becomes less secure especially those with low skills and poor access to training. Therefore, offering opportunities for continuous learning to workers so that they can upgrade their skills should lead to smoother transitions between jobs and from declining to emerging sectors; develop the capacity to innovate, transfer and absorb new technologies and generate creativity and innovation; ensure higher economic returns from new technologies and higher wages following higher productivity and transition to the formal economy; and lead to better working conditions, higher levels of job satisfaction, poverty reduction and better health outcomes.
91. Education, training, skills development and lifelong learning are fundamental conditions for creating a conducive environment for competitive and sustainable enterprises.⁷⁸ Enterprises will benefit from skills development and productivity gains by reinvesting in product and process innovations, diversifying business activities and maintaining and improving competitiveness and market share.⁷⁹ The spillover of the benefits of skills and lifelong learning to society at large is critical for establishing quality jobs, higher employment, quality and efficiency of services, reduced poverty, respect for labour rights, social equity and competitiveness in changing global markets and dynamic growth sectors.⁸⁰ Skills are important for ensuring that the outcomes of economic and trade restructuring are not only economically efficient but also inclusive and socially just, including in terms of the quality of jobs, collective bargaining and social and labour protection.⁸¹

2.4. What skills will help to meet challenges and prepare people for the future of work?

92. The trends discussed in Chapter 1 have led to the emergence of new economic activities, production processes, business models, products and services, which are expected to lead to structural shifts in future work and consequently in skills demand. As jobs become more interdisciplinary, skills- and information-intensive and innovation-oriented, workers will need a combination of core skills and specialized technical skills to help them move across occupations and from the informal to the formal economy.

⁷⁷ The term “STEAM” adds the fifth element “arts” to the four elements of the original term “STEM” (science, technology, engineering and mathematics), highlighting the importance of creativity and innovation for future jobs.

⁷⁸ See ILO, *Skills for Improved Productivity*.

⁷⁹ See ILO, *Skills for Improved Productivity*.

⁸⁰ See ILO, *Skills for Improved Productivity*.

⁸¹ OECD, *OECD Employment Outlook 2019*.

- **Core skills:** Core skills are non-technical skills that are relevant to all jobs and apply to work generally, such as social and emotional, cognitive and meta-cognitive, basic digital and green skills. They apply across occupations and professions, as well as between low- and high-level jobs. Examples of core skills include collaboration and teamwork, negotiation and conflict resolution, communication, emotional intelligence, creative and innovative thinking, analytical and critical thinking, problem-solving and decision-making, learning to learn, foundational literacies, planning and organizing and career management.

As core skills are to some extent transferable between occupations, as well as within and across different sectors, they enable workers to more quickly adjust to changes in demand for workers and engage in lifelong learning.⁸² For employers, these skills and capacities mean that employees are better able to respond to change in the workplace, allowing enterprises to develop more innovative and productive workplaces. In view of the growing importance of core skills for the future of work, the ILO, in collaboration with other United Nations organizations and partners, is developing a new framework for core skills, including digital and green skills for employability, under its Programme and Budget for 2020–21.⁸³

- **Specialized technical skills:** These skills refer to the specialized skills, knowledge or know-how to perform specific duties or tasks. Given the rapid advancement of technology across sectors, enterprises need a complex range of technical skills, including at advanced levels, to innovate and design new products and to operate and maintain new technologies. More advanced digital skills are also being required in specific sectors, such as 3D printing and robotics in manufacturing or enterprise resource planning in tourism and hospitality.⁸⁴

93. The COVID-19 pandemic has highlighted the importance of skills for fast crisis response and longer-term recovery. In both cases, many people will need to upskill to keep their jobs, acquire new skills in the same working environment or move to new jobs in same or in a different sector of economy. In particular, the online mode of working and learning drew the attention to **digital skills** – from digital literacy for learners, teachers and workers to study and work online to digital proficiency for emerging jobs. Secondly, the pandemic underscores the importance of certain core skills, such as communication, learning to learn, teamwork, problem-solving and decision-making, critical and innovative thinking, planning and organizing, negotiation and conflict resolution and self-management, which can help individuals handle stress during the pandemic crisis, overcome career disruptions and find new jobs. Last but not least, meta-cognitive and specialized technical skills will be needed for the transition paths to new jobs in the advanced technological and digital economy of the future.

⁸² MGI, *A Labour Market That Works: Connecting Talent with Opportunity in the Digital Age*, 2015.

⁸³ ILO, *Programme and Budget for the Biennium 2020–21*.

⁸⁴ ILO, “Impact of Digitalization on Skills Demand”, forthcoming.

► Chapter 3

How to make skills systems and lifelong learning future-ready

94. Skills development is increasingly a key strategy for addressing challenges and reshaping the world in a positive way. Future-proof policy choices should be made now given their potential impact on the future of work.
95. Yet in many countries, poorly performing education and training systems signal an increasing disconnect between skills development and the needs of their economies and societies. Supply-driven training, limited resourcing and chronic underinvestment in institutions and programmes have created barriers to the development of the right skills needed by the labour market, both today and in the future.
96. As countries face variable challenges in different national contexts, there is no “one-size-fits-all” policy solution to create and sustain a future-ready skills system. While international labour standards provide a solid framework for quality education, skills development and lifelong learning, the rapidly changing world of work and the global challenges pose many additional questions. What will the future of work look like and what skills will it demand? How can we close the gap between skills development and fast-evolving business needs? How can initial education and training reshape the “front-loading” of skills towards lifelong learning and develop dynamic and innovative forms of skills development and recognition? How can societies enhance their skills pool of and ensure that no one is left behind? How can countries establish effective skills and lifelong learning system as the shared responsibility of all?
97. In disrupting our ways of living, working and learning, the current COVID-19 pandemic added more questions: How to mitigate the immediate impact of COVID-19 in skills delivery, TVET and apprenticeships? How can individuals, employers and workers adapt to online modalities in all spheres of life? How can we go beyond the crisis responses and shape learning and jobs of the future so that they contribute to digital, green and other transformations?
98. As skills development has an important role to play in efforts to lessen the impact of COVID-19 and limit the career-scarring effects of prolonged unemployment and skills mismatch and support people back into work safely, immediate actions are needed. At the same time, the above questions require integrated policy and operational responses to help accelerate the recovery, build the resilience of workers and firms and turn challenges into opportunities. This chapter and Chapters 4 and 5 below will provide working solutions and innovative approaches linked to skills and lifelong learning.

3.1. Skills needs assessment, anticipating and matching

99. While the demand for skills is changing at an ever-increasing pace in response to global megatrends, the design and delivery of the corresponding training solutions can take significant time. Information asymmetries, limited geographical mobility, imperfect recruitment practices and barriers that limit access to training all contribute to skills

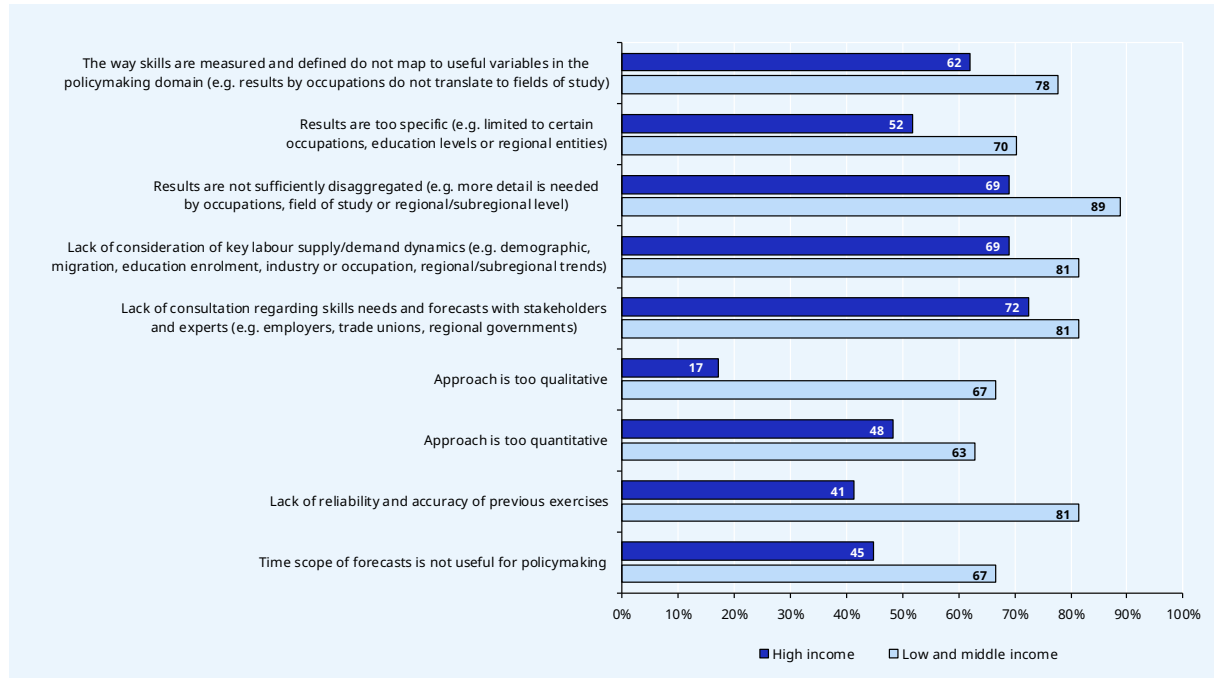
mismatch.⁸⁵ Although perfect matching between skills demand and supply is not feasible, anticipating skills needs is necessary to reduce the risk of large skills mismatches, which reduce both the employability of individuals and the productivity of enterprises.

100. ILO Recommendation No. 195 recognizes the importance of identifying and forecasting trends in supply and demand, noting that ILO Members should “in consultation with the social partners, and taking into account the impact of data collection on enterprises, support and facilitate research on human resources development and training” (Paragraph 19).

Key challenges

101. Both developed and developing countries are actively using skills need assessments and anticipation to design informed policy measures as part of the efforts to overcome current and mitigate future skills mismatches. Key obstacles include the lack of funds and required technical expertise, especially in developing countries, and the lack of coordination among the organizations involved.⁸⁶
102. Lack of reliable data sources also remains a challenge, especially in lower-income countries where data are not sufficiently refined in variables or disaggregated to a local level to allow for more targeted policy responses. All these factors contribute to the biggest challenge – the translation of findings into policy and practice (figure 14).

► **Figure 14. Barriers in translating skills needs information into policy and practice, by income group (percentage of national constituents reporting existence of a barrier)**



Source: ILO, Skills Needs Anticipation; results of an ETF-CEDEFOP-OECD-ILO joint global survey of ministries of labour and education, employers' associations, trade unions and other stakeholders in 61 selected countries.

⁸⁵ ILO, “Anticipating and Matching Skills and Jobs”, 2015.

⁸⁶ ILO, *Skills Needs Anticipation: Systems and Approaches. Analysis of Stakeholder Survey on Skill Needs Assessment and Anticipation*, 2017.

What works in skills needs assessment and anticipation

- 103.** Skills needs assessment and anticipation is a component of a broader labour market information system. Assessment and anticipation rely on comprehensive, reliable, relevant and regularly updated data, methods and tools, as well as analytical capacities and governance mechanisms. The production of information on current and future skills needs should be followed by analysis and application of results.
- 104.** ILO research ⁸⁷ demonstrates that systematic approaches and strategic diagnostics are necessary in order to inform not only the planning of national and sectoral skills strategies but also policies that target decent work and productive transformation, including investment, trade, industrial and environmental policies. Their results should inform the design of competency and occupational standards and curricula; underpin budget allocations for education and training programmes, including apprenticeship training, skilling, reskilling and upskilling; and inform human resource development decisions by enterprises, vocational guidance and career counselling systems, as well as active labour market policies and migration policies. ⁸⁸
- 105.** Moreover, social dialogue and coordination are essential to skills needs anticipation since they are vital for informed decision-making and the implementation of findings and recommendations. The following key points can assist in skills anticipation:
- Build up and sustain technical capacity by establishing public institutions to generate and update regular skills assessment and anticipation in a systematic and sustainable way, so that relevant actors can develop technical expertise and methodologies and base analysis on appropriate past experiences.
 - Create and further develop a well-coordinated and robust network of ministries and other decision-making bodies, information providers and users, including national statistical offices, public employment services, academia, employers' organizations and trade unions, with clear and legally stipulated mandates to launch skills anticipation and assessments activities, review the results and assist in the process of translating analysis into policy and practice. ⁸⁹
- 106.** Good skills needs anticipation systems are well integrated with effective national and sector skills councils and other tripartite skills bodies in a number of developed and developing countries, while coordination with efficient public employment services and career guidance services increases the chances for the effective use of their results. ⁹⁰ Complementarity of information and analysis at national, sectoral, regional and local levels is also important. Stakeholder involvement works best when high-level political engagement underpins the discussion or when there is a national skills strategy to centre the discussion.
- 107.** Sectoral approaches are also a good practice as they provide an opportunity for in-depth discussions on specific skills needs with key sectoral stakeholders. Sectoral approaches make it easier for stakeholders to develop skills policies and strategies with a strong linkage to productivity and competitiveness, active labour market policies and broader

⁸⁷ ILO and OECD, *Approaches to Anticipating Skills for the Future of Work*, 2018; ILO, *Skills Needs Anticipation*; ILO and WTO, *Investing in Skills*.

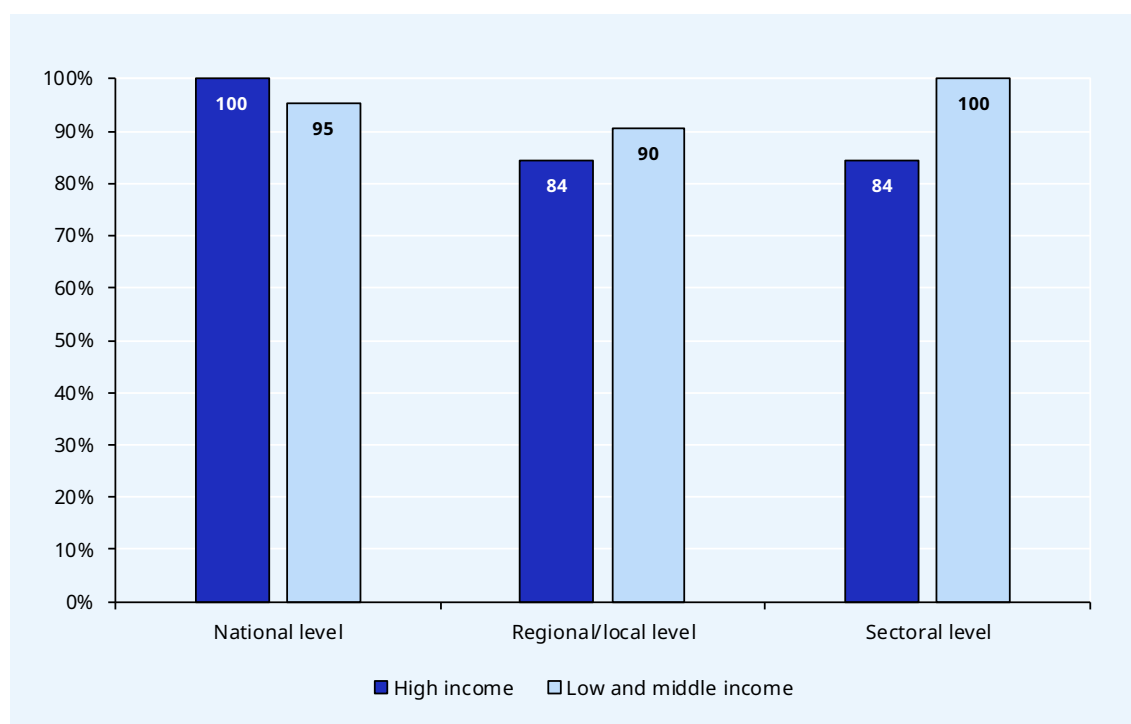
⁸⁸ ILO, *ILC Reports of the Committee for Labour Migration*.

⁸⁹ ILO, *Skills Needs Anticipation*.

⁹⁰ ETF, CEDEFOP and ILO, *Guide to Anticipating and Matching Skills and Jobs*, Vols 1–6.

development and sector policies, and to have a shared understanding of challenges and a shared commitment to addressing them. Sectoral approaches also work best in developing countries (see figure 15).

► **Figure 15. Applying skills needs assessment and anticipation at national, regional and sectoral levels** (percentage of national constituents reporting implementation at the respective level, aggregated by income groups)



Source: ILO, Skills Needs Anticipation; results of an ETF–CEDEFOP–OECD–ILO joint global survey of ministries of labour and education, employers' associations, trade unions and other stakeholders in 61 selected countries.

Skills anticipation methods, approaches and tools

108. There are many approaches and methods to analysing current and future skills needs, including establishment skills surveys, quantitative forecasts, sectoral foresights, tracer studies and Delphi methods (multiple rounds of questionnaires sent to a panel of experts), which have their advantages and disadvantages (see Appendix I) and produce optimal results when used in combination and in a complementary way. While more elaborate approaches tend to be used in developed countries, including quantitative forecasts and big-data analytics, a broad range of qualitative methods are still used in developing countries.⁹¹ The ILO, in collaboration with other international agencies, has developed a number of tools and guidance documents (box 5). It also provides capacity development and delivers tailor-made courses at regional and country levels, working closely with national partners. As a response to the current pandemic, the ILO has developed and delivered online modules of the skills anticipation and matching course for ILO constituents.

⁹¹ ILO, *Skills Needs Anticipation*.

► Box 5. ILO tools for skills needs analysis and anticipation

- “Anticipating and Matching Skills and Jobs”, guidance note (2015)
- *Skills for Trade and Economic Diversification (STED): A Practical Guide* (2012)
- *Rapid STED: A Practical Guide* (2020)
- *Guidelines on Rapid Assessment of Reskilling and Upskilling Needs in Response to the COVID-19 Crisis* (2020)
- *Anticipating Skill Needs for Green Jobs: A Practical Guide* (2015)
- *Guidelines for Inclusion of Skills Aspects into Employment-Related Analyses and Policy Formulation* (2015)
- *Skills Technology Foresight Guide* (2016)
- *Guide to Anticipating and Matching Skills and Jobs*, Vols 1–6 (2015–17)

109. The ILO has implemented its programme on skills for trade and economic diversification (STED) in more than 20 countries and more than 30 economic sectors (box 6). It provides a practical illustration of sectoral approaches to skills governance that enable national and sectoral partners – including governments, training designers and providers, employers’ organizations and trade unions – to test and pilot the institutional mechanisms in which industry has a strong voice. Examples of sectors covered include agro-food processing, tourism and hospitality, pharmaceuticals, furniture, metallurgy and light manufacturing. The programme contains a strong capacity-development element that is key for the institutionalization and sustainability of the skills needs anticipation function.

► Box 6. The ILO’s STED approach ¹

STED is designed to support productivity growth and decent employment creation in sectors that have the potential to increase exports and contribute to economic diversification. STED helps countries to make trade more inclusive by ensuring that skills development systems help firms get the workers they need and help workers get productive and decent jobs. It establishes mechanisms for collaboration and governance and develops institutional capacities.

In Malawi, STED-based activities were undertaken in the horticulture and oilseeds sectors in support of national export strategy through demand-led skills development. The STED approach not only strengthened the sectors’ evidence-based strategic decision-making but also enhanced the national capacity for skills anticipation and social dialogue.

¹ See ILO, *Skills for Trade and Economic Diversification*; and ILO, *Rapid STED*. While STED is probably the best known tool of the ILO in this area, parallel/supporting tools exist and are applied depending on the specificities in a country. One example is *Trade and Value Chains in Employment-Rich Activities (TRAVERA)*, which aims to help enterprises in developing countries to integrate into export value chains.

110. Expert institutions and stakeholders explore innovative methods to anticipate skills needs, such as technology foresights (box 7). Big-data analytics of vacancy data collected by online job advertisement portals have the potential to substantially alter the landscape of skills anticipation and matching; ⁹² however, they cannot yet substitute for a high-quality traditional labour market information system and are best used in combination with other methods. ⁹³

⁹² ILO and OECD, *Approaches to Anticipating Skills*.

⁹³ ILO, “The Feasibility of the Use of Big Data for Skill Needs Anticipation and Matching”, forthcoming.

► Box 7. Innovative skills needs anticipation methods

In Brazil, the Serviço Nacional de Aprendizagem Industrial (SENAI) foresight model is an integrated model that develops sectoral prospects and captures industrial, technological and organizational change and impacts on employment. The process is led and managed by an executive group of SENAI technical experts, academia and business representatives, who are both producers and users of the results. The model combines different foresight and forecast techniques, both quantitative and qualitative, and produces information to feed into occupational analysis and thematic stakeholders' discussion.

In the Russian Federation, the Skills 2030 Foresight has been conducted for a number of high-technology sectors and technology-driven industries. The focus is to assess how key trends and new technologies change the nature of work tasks and in turn how these change the demand for skills. A "map of the future" for these sectors and industries is being designed in a series of foresight sessions.

Valuable new tools have demonstrated the power of a data-driven approach to identify reskilling pathways and job transition opportunities that will help individual workers, enterprises and governments to prioritize actions and investments. The availability of **big data and real-time data** will enable larger sample sizes and higher frequencies than those of traditional surveys. Derived mainly from internet-based data sources and thus not requiring field data collection, they are becoming important tools for research and policy.

Sources: ILO and OECD, *Approaches to Anticipating Skills*; ILO, *The Feasibility of the Use of Big Data*.

111. The COVID-19 pandemic led to a paralysis of job-search and job-matching services and a lack of short-term information, including in digitalized form. This has affected the short-term assessment of demands, skills/labour shortages and reskilling needs, particularly in the SME sector. It made it difficult for TVET and skills development systems to anticipate and adapt to what could be a significantly changed labour market in the coming months and years. The situation requires that fast action be taken to reskill and upskill people as an integral part of comprehensive policy responses and fiscal recovery packages. Moving quickly in identifying skills demand in sustained jobs and in jobs experiencing spikes in demand due to the new COVID-19 situation will help to retrain workers in negatively affected sectors. Taking advantage of existing and new opportunities will be important for rapid economic and social recovery.
112. In order to provide an effective skills development response that makes an important impact on the speed at which sectors recover and on the extent to which employment is restored, the ILO has developed Guidelines on Rapid Assessment on Reskilling and Upskilling Needs in Response to the COVID-19 Crisis, which are now being implemented in a dozen countries in Africa, Asia and Latin America. The Guidelines aim to help countries prioritize individuals and businesses whose future depends on skills development, produce the rapid assessment itself in a credible and timely manner, and mobilize follow-up action (box 8).

► Box 8. ILO Guidelines on Rapid Assessment of Reskilling and Upskilling Needs in Response to the COVID-19 Crisis

The Guidelines focus on three broad types of impact on the labour market and hence on demand for skills and opportunities for workers, with implications for reskilling and upskilling needs:

(i) *Sectors in which COVID-19 has a significantly negative impact on employment*

The COVID-19 pandemic has had negative impacts on employment across most economic sectors in almost all countries. It is important to identify and anticipate the skills needed for recovery and

future growth and to identify practical actions to be taken to reskill and upskill workers to put people back to work.

(ii) Sectors and occupations in which COVID-19 increases demand for skills or is likely to drive structural change with a new set of skills demanded

While activity in some sectors will recover more slowly or may not recover, the demand for some goods and services will increase. For example, there may be a lasting increase in the demand for services in a form that can be delivered with reduced close in-person interaction and for products that limit physical in-person contact in daily life. Not all of these increases in employment will be sustained, but some will require immediate investment in reskilling and upskilling to meet current and future skills needs. Moving quickly to take advantage of opportunities created will be important both to rapid economic and social recovery and to replace the employment lost in sectors affected negatively.

(iii) Groups of individuals that need training, reskilling and upskilling

Skills development will be an important part of the policy offerings needed to get large groups of individuals whose employment prospects have been damaged by the pandemic back into employment in decent and stable jobs. Specific groups to think about include people in precarious employment whose jobs are likely to be at risk, especially those with weak employment relationships or contractual arrangements; young people entering the labour force who have difficulty finding employment; newly unemployed low-skilled workers of all ages in affected industries; newly unemployed workers with medium- or high-level skills that do not closely match the needs of recovering industries; older workers who are newly unemployed; and informal economy workers facing diminished income-generating opportunities. They may also include groups frequently disadvantaged in the labour market, such as women, minority communities, returning migrant workers or internal migrants, refugees, people with disabilities and workers who were already long-term unemployed or precariously employed before the pandemic. It is important to identify and anticipate the types of real labour market opportunities available to targeted groups and identify the main gaps between the skills they have and those needed by employers in order to identify practical actions that can be taken to reskill and upskill, bridge skills gaps and facilitate transition into work for new labour market entrants.

Follow-up actions may be implemented through education and training institutions, public employment services and other institutions, acting independently or in collaboration with industry. They may involve having organizations such as qualifications bodies and funding bodies fast-track approval for initiatives by education and training providers or employers so as to adapt curricula or learning delivery methods to meet new needs and enable delivery under the constraints imposed by the pandemic or rapidly scale up the number of trainees reached. They may involve having ministries and agencies make new funding streams or increases in existing streams available for skills development needs. They may provide opportunities for innovative donor-supported development cooperation initiatives.

3.2. Reshaping skills delivery and lifelong learning: How to rethink skills systems for the twenty-first century

113. Governments and social partners have started to rethink the ways by which we develop, certify and recognize skills in order to improve the functioning of skill systems. These include taking steps to improve the integration between different education and training sectors; increase the nature and scope of flexible learning pathways; make training programmes and organizations more responsive and update teaching and learning

methods to better develop core skills and learn from the recent experience of online learning during the pandemic.⁹⁴

- 114.** While reforms to traditional lecture and classroom based provision has often been a slow process, COVID-19 has acted as a catalyst to develop immediate and often innovative alternative solutions in a short period of time. Remote online and distance learning have become the new reality compared to their relatively low use before the crisis for many learners. Efforts were made to improve connectivity and access to technology, provide guidance and in-time skills development for teachers and trainers, support training institutions in using e-learning platforms, adapt teaching and learning models, reorganize programmes and curricula and target specific measures for disadvantaged groups.
- 115.** However, as this shift to online and distance learning negatively affected the quality of learning in many countries, further efforts will be needed to compensate for the loss of practical training through a combination of face-to-face and blended learning programmes using cost-effective methods, tools, technologies and revised teaching and learning resources.

“Opening up education” and the “new reading” of lifelong learning: Towards more flexible, broader and integrated lifelong learning opportunities

- 116.** In the context of both long-standing and recent challenges, there is growing recognition of the need to rethink how well education and training systems actually develop skills rather than only issue qualifications. Skill demands will change significantly in coming years⁹⁵ and as a consequence, many occupational profiles and skill sets need to be updated, with subsequent work to adjust qualifications, programmes and teaching and learning resources. Yet there are structural barriers in most educational systems between different education and training sectors, which are related to curriculum and certification, delivery and assessment models, learning pathways, financing and governance. These differences prevent the development of a more holistic and broader approach to the development skills that will enable more integrated and continuous learning pathways across educational sectors and institutions.
- 117.** Promising approaches include interdisciplinary programmes and collaborative learning in addition to the mastery of discipline-based knowledge through problem- and project-based learning. Such approaches blur the boundaries between educational sectors; incorporate greater flexibility and permeability, including by providing continuous enrolment models; and include more short-cycle programmes. Moving away from the principles of mass education, more personalized learning pathways address the needs and goals of each individual learner and allow for skilling, reskilling and upskilling of adults, thereby enabling the transitions between learning and work. This greater flexibility, however, challenges the existing operational models that exist in many education and training institutions today.
- 118.** The switch to online and distance learning during the months of the pandemic has highlighted the need to reshape provisions and rethink how learning is facilitated, assessed and certified. Reorganizing curricula and reviewing programmes provides an opportunity to introduce problem- and project-based learning. The increased use of blended learning offers the application of digital learning technologies to enable more customized learning

⁹⁴ See, for example, references to national developments in UNESCO, *Global Education Monitoring Report 2019: Building Bridges for Gender Equality*, 2019.

⁹⁵ WEF, *Strategies for the New Economy*.

strategies that respond to the learning needs and pace of the individual students. Recent accelerated adoption of digital solutions in TVET and skills development has also established new partnerships with technology companies to use online platforms, apps and learning resources. This closer integration of formal and non-formal learning has increased the likelihood of formal recognition for many free distance and online courses that are now more readily available.

Flexibility and time matter: Towards agile response mechanisms

- 119.** It is also becoming clear that skill needs change as a result of changing job requirements. Many skills systems are constrained by rigid administrative requirements and systems for curriculum and qualifications, often constructed around centralized and fixed sets of skills or vocational standards that are not sufficiently dynamic and exacerbate skill mismatches.⁹⁶ This is one of the main challenges for TVET and skill systems and is a major driver of the performance differences that we see around the world. Nationally developed syllabuses and curricula that fix the content and exact number of classes for a period of four or five years and have inflexible programme entry and exit arrangements and restricted learning pathways are other examples of rigidity. While nationally recognized qualifications would continue to play an important role in the labour market, mechanisms to ensure a continuous review and updating of more flexible qualifications, modular curriculum and flexible pathways will allow for greater local customization and adaptation to changing jobs and skills needs. Balancing these developments with core educational requirements and quality assurance will remain a challenge.
- 120.** Although many education and training systems are geared towards developing qualifications and qualifications frameworks,⁹⁷ a recent shift in focus from qualifications to skills and to “micro-learning” characterized by small learning units and short-term learning activities can be observed in some countries. Such reforms address the existing limitations of qualifications to certify the “job-fit” status of learners,⁹⁸ better support the development of in-demand skills (such as digital skills and core skills for employability) and enable skills recognition for enhanced workers’ mobility and job transitions (box 9).

► Box 9. Case study of Finland

The current VET reform in Finland aims to strengthen VET capacity to respond to the changing skills needs of individuals. A clearer and simpler range of qualifications has been established by reducing their number and establishing frameworks of compulsory and optional modules. Training organizations now offer continuous enrolment based on individual learning and career plans developed for all students, who can enrol for individual modules, partial qualifications or full credentials according to their career and learning needs. Vocational qualifications are available to existing workers and those seeking work along with students in upper secondary school in combination with a matriculation examination (vocational and general upper secondary education).¹

¹ CEDEFOP, “Financing of Education and Training”.

⁹⁶ ADB, *Innovative Strategies in Technical and Vocational Education and Training for Accelerated Human Resource Development in South Asia*, 2014; African Union, “Continental Strategy for Technical and Vocational Education and Training to Foster Youth Employment”, 2018.

⁹⁷ OECD, *OECD Employment Outlook 2019*.

⁹⁸ WEF, *Strategies for the New Economy*.

- 121.** Digital technologies can also be applied to the management of TVET and skill systems by mapping the changing skills content of jobs, identifying jobs with similar skills and creating new methods of classifying qualifications.⁹⁹ Innovative national or institutional approaches towards such dynamic frameworks (such as the O*NET portal in the United States and ESCO in the EU) are being developed to map changing job requirements and present them in a more dynamic way to both jobseekers, career services and education and training systems. Burning Glass Technologies has developed another innovative approach, which uses innovative methods to map multiple job advertisements and produce condensed information on job content, demand and skills requirements at the local, regional and national levels.¹⁰⁰
- 122.** The pandemic demanded even more rapid reactions from national authorities in terms of flexible skills assessment and awarding of qualifications, particularly in sectors facing a rapid surge in the demand for, and severe shortage in, the supply of workforce. In sectors such as healthcare, a direct route to qualifications was established in some countries to quickly respond to the shortage of workers. Other countries are issuing short-term, fast-track licences. For example, Canada is leveraging unlicensed internationally trained health professionals and recent medical school graduates to fight COVID-19. Ontario issued supervised short duration certificates for those who meet minimum qualifications and conditions. In the United Kingdom of Great Britain and Northern Ireland, a COVID-19 temporary register to recruit health professionals who left the sector in recent years and qualified migrants was launched with a set of emergency standards that enabled students to finish their training on placement while ensuring that all of their learning outcomes were met.¹⁰¹
- 123.** A number of developed countries have also gone beyond addressing immediate skills needs in fighting the pandemic and in supporting high-demand occupations for workers affected by COVID-19 who are looking to upskill or reskill.¹⁰² Countries have introduced regulatory and funding mechanisms to improve access to flexible, module-based short-cycle learning options that support agile and resilient reskilling and upskilling. The Australian Government has developed a higher education relief package that provides funding to providers and support for inexpensive short courses (up to six months). The Australian Department for Education, Skills and Employment has been providing online information to TVET institutions on how to adopt flexible and online strategies for training.¹⁰³

From input and process towards a competence-based approach

- 124.** Moving away from measuring time spent to evaluating actual skills and competences learned is at the heart of the so-called competence-based approach, which focuses on what students have learned and how they perform in real work situations, rather than on time spent in training, programme completion or factual knowledge recalled. This reorientation is essential if young learners are to be adequately prepared for their first entry into the labour market and helping older workers to stay up-to-date with current needs (box 10). Such a shift is also essential for improving the quality and relevance of skills training.

⁹⁹ WEF, *The Future of Jobs Report 2018*, 2018.

¹⁰⁰ WEF, *Strategies for the New Economy*.

¹⁰¹ OECD, "VET in a Time of Crisis: Building Foundations for Resilient Vocational Education and Training Systems", 2020.

¹⁰² See for example European Commission, "Recovery and Resilience Facility".

¹⁰³ Andreas Schleicher, *The Impact of COVID-19 on Education: Insights from Education at a Glance 2020* (OECD, 2020).

- 125.** The competence-based approach is not new to many advanced TVET systems, yet its practical implementation remains limited in many countries owing to resource implications, institutional lethargy and the additional work required to enable institutions, teachers and trainers to adjust.

► **Box 10. Application of the competence-based approach**

Educational technology can offer new ways to move away from assessing the acquisition of advanced skills in terms of time spent in courses, credits completed or examinations towards measuring proficiency and identifying skills and subject area knowledge at the same time. One such example is Coursera, an online learning provider that uses a tagging system to identify skills acquired through their online platform and creates bundles of micro-credentials able to be “stacked” into full qualifications issued by partner higher education institutions.¹

¹ WEF, *Strategies for the New Economy*.

Partnerships in skills development and lifelong learning: Towards a new skills and lifelong learning ecosystem at local level

- 126.** The need to match supply and demand has led to the evolution of many traditional partnerships between training providers and businesses through different models such as skills centres and academies, assessment centres or regional centres of excellence and innovation hubs, which combine education and training services with business development and research support, developing local skills and lifelong learning ecosystems at the level of skills demand and supply.¹⁰⁴ Such partnerships are accessible to a large variety of stakeholders, so that, at a minimum, they pool resources and training expertise to address specific employment and skills issues of a local area, region or cluster.¹⁰⁵ They also improve links between national and local employment and economic development priorities, improve access to enterprises and existing production facilities and enable improved partnerships between the world of work and the world of learning. Two additional trends have contributed to the emergence of such arrangements: the decentralization of education and training institutional management and the shift towards pooling resources at the local level. The increased autonomy of institutions has created options for enhanced cooperation with business and greater flexibility to accommodate change and respond to local skills demand.¹⁰⁶
- 127.** Many of these initiatives have been led by the social partners, which also amplifies the much-needed focus on upskilling and reskilling of adults already in employment. Employers’ and workers’ organizations can and do engage in skills development, but more can still be done to increase that engagement and give greater attention to the reskilling and upskilling needs of workers. For employers’ and workers’ organizations, there remains considerable scope to strengthen the services they provide to members and address the skills challenges individuals and enterprises face. Programmes such as the United Kingdom-based Union Learn and the Global Apprenticeship Network are good examples of social partner-led initiatives improving skills outcomes in workplaces.¹⁰⁷ Still other programmes have sought to identify those at risk of becoming unemployed and provide them with skills and

¹⁰⁴ EU, *Mapping of Centres of Vocational Excellence (CoVEs)*, 2019.

¹⁰⁵ ILO and OECD, *Better Use of Skills in the Workplace: Why It Matters for Productivity and Local Jobs*, 2017.

¹⁰⁶ CEDEFOP, “Financing of Education and Training”.

¹⁰⁷ Jeff Bridgford, *Trade Union Involvement in Skills Development: An International Review* (ILO, 2017).

vocational guidance in advance to ensure that they successfully manage labour market transitions (box 11).

► **Box 11. Social partners' involvement in skills delivery**

Following the establishment of sectoral policies and within the tripartite sectoral councils in Argentina in the framework of the National Council for Employment, representatives of the State, employers' organizations and trade unions together defined a training and certification system and developed a national training programme for workers in the construction industry. Over the past ten years, 54,741 workers have been trained and certified in health and safety and environment training, while 339,107 workers have been trained and certified through initial and continuing training to raise skill levels and improve individual employability.¹

¹ ILO, *Workers' Organizations Engaging in Skills Development*, 2019.

128. COVID-19 has also acted as a catalyst for new learning consortia, partnerships and ecosystems that provide more collaborative and in many cases innovative initiatives and solutions for addressing the crisis: updating curricula using digital tools in response to increased demand in sectors (e.g. chemistry, health); developing training materials and facilitating distance learning by education and training institutions for partner companies; and providing coordinated responses to the organization and delivery of online courses by IT professionals, the private sector, social partners, internet providers and governments. The most common public-private partnerships' responses appear to be the deployment of online courses for workers and the development or usage of learning platforms by institutions. In Nigeria, an online digital platform for youth training has been developed through a collaboration between IBM and the Federal Ministry of Youth and Sports Development, while in many parts of the world large online learning platforms have offered part of their courses for free or have started cooperation programmes with governments.¹⁰⁸

3.3. The value of skills recognition

129. Most learning in an individual's life occurs in non-formal and informal ways. In many developing countries with large informal economies and school dropout rates, the majority of young people acquire workplace skills by informal means. The RPL process serves to assess and certify a person's competencies, regardless of how, when or where they were acquired and whether they were acquired formally or informally, as suggested in ILO Recommendation No. 195. Unfortunately, most formal education systems do not recognize non-formal and informal learning. RPL is therefore an alternative pathway to formal education and training that facilitates multiple transitions between education and the labour market, supporting lifelong learning, employability and formalization of work, as well as social inclusion and equity for disadvantaged groups including women, refugees and migrant workers.

¹⁰⁸ ILO, *ILO-UNESCO-WBG Joint Survey on Technical and Vocational Education and Training (TVET) and Skills Development during the Time of COVID-19*, 2020; Coursera for Government, "Transform your Workforce with the Skills of the Future".

Implementation of RPL: Ensure capacity and “social” recognition and simplify procedures

130. Accordingly, many countries have taken steps to establish RPL systems but often face challenges related to complex and time-consuming methodologies; limited awareness and capacity of institutions, staff and learners; low participation of social partners and inadequate funding. Therefore, a strategy for establishing or strengthening an effective RPL system may include, in line with Recommendation No. 195, (a) raising awareness and providing effective guidance; (b) ensuring the active participation of all stakeholders in RPL development, implementation and evaluation (box 12); (c) harmonizing the RPL with qualification systems and ensuring adequate capacity; (d) establishing effective quality assurance, monitoring and evaluation mechanisms; (e) promoting a sustainable, equitable funding mechanism; and (f) providing skills upgrading opportunities to RPL candidates, including migrants and refugees (box 13).¹⁰⁹

► Box 12. Stakeholders’ ownership and commitments in RPL

- In South Africa, employers’ and workers’ organizations participate in the design and implementation of RPL by sector education and training authorities; employers also promote RPL in many sectors, such as insurance, banking, agriculture and the media.¹
- In Brazil, the SENAI certification system aims to engage enterprises from the design stage and promote human resources policies that favour the recognition of skills for career development. Occupational profiles prepared jointly with representatives of enterprises and workers in sectoral technical committees are the reference for assessment.
- In New Zealand, industry training organizations have developed industry-based RPL models and carry out or supervise assessments in the framework for quality assurance prescribed by the New Zealand Qualifications Authority.²
- In Australia, individuals first visit a skilling solutions centre (often in a local shopping centre) and use a web-based self-evaluation tool to match their skills, knowledge and experience to a relevant qualification (full or part). They are then provided with a list of preferred providers where they can undergo the RPL process.³

¹ Aggarwal, *Recognition of Prior Learning*. ² OECD, *The Role of National Qualifications Systems in Promoting Lifelong Learning, Background Report for New Zealand*, 2004. ³ Aggarwal, *Recognition of Prior Learning*.

► Box 13. RPL for Syrian refugees in Jordan

In recent years, more than 630,000 Syrian refugees have entered the Jordanian labour market. The ILO, in collaboration with the Jordanian Centre for Accreditation Quality Assurance and funded by the United States and the United Kingdom, has implemented an RPL programme in sectors such as construction, confectionary and ready-made garments and agriculture. Recognized local providers offer training to beneficiaries, leading to certification in the area of their expertise and subsequent access to work permits. The project also supports five guidance and support offices in career counselling and placement. To date, 10,340 Syrian refugees have received a work permit (8,700 in construction; 1,200 in manufacturing) and earn more than those without work permits.

Source: ILO, “Guide for Making TVET Inclusive for All”, forthcoming; ILO, “Formalizing Access to the Legal Labour Market through Recognition of Prior Learning (RPL) and Certification for Syrians and Jordanians Working in the Construction, Confectionary and Garment Sectors”.

¹⁰⁹ Ashwani Aggarwal, *Recognition of Prior Learning: Key Success Factors and the Building Blocks of an Effective System* (ILO, 2015).

- 131.** The COVID-19 pandemic has increased the demand for RPL to recognize the skills of workers losing jobs and returning migrants with the purpose of deploying them in sectors that are experiencing labour and skills shortages, such as the medical and healthcare sectors. For example, the authorities in Ireland mobilized doctors and healthcare professionals with refugee backgrounds who were not licensed to practice in Ireland. Online platforms to facilitate RPL registration, assessment, job-matching and upskilling for workers, including returning migrant workers, are instruments under consideration to support pathways to formalized qualifications through RPL.

Mutual recognition of qualifications by countries

- 132.** RPL assists individuals in obtaining qualifications that reflect their competences. However, migrant workers and students often face the additional challenge of not having their qualifications recognized in a new country. Therefore, bilateral and regional mutual recognition arrangements and other innovative approaches, such as the use of online skills profiling tools, block chain and other digital technologies, could be considered for promoting skills mobility and fair migration, albeit with some implementation challenges, including the issues pertaining to the scarcity of resources and capacities and the complexity of recognition procedures.¹¹⁰ During the last decade, international skills harmonization and recognition have accelerated. Association of Southeast Asian Nation countries have concluded eight mutual recognition arrangements covering seven high-skill occupational fields, as well as the tourism sector, with over 30 occupations and joint standards and curricula, to facilitate the free movement of qualified workers between countries. In the EU, countries may create a public skills validation portal adhering to EU and international standards of work and learning in the platform economy.¹¹¹

Digital and micro-credentials

- 133.** Adopting innovative methods often saves time and simplifies processes, such as by using block chain technology¹¹² for digital accreditation of personal and academic learning. Certificates issued by educational organizations, in particular qualifications and records of achievement, can be permanently and reliably secured using this technology, which allows users to verify the validity of certificates directly against it without having to contact the original issuer, eliminating the need for educational organizations to validate credentials. This can also automate the award and recognition of skills and credit transfers and can even store and verify a complete record of formal and non-formal achievements throughout an individual's lifelong learning journey.¹¹³
- 134.** Given the shift to online learning, the recognition of this form of learning and the credentials it delivers has become more important than ever. The trend towards increased recognition of micro-credentials and "badges" that certify learning achievements in national qualification systems may accelerate the formal recognition of the growing non-formal and informal learning.¹¹⁴ A portable portfolio or digital passport, accompanied by online

¹¹⁰ Vicki Donlevy et al., *Study on Obstacles to Recognition of Skills and Qualifications* (OECD, 2016).

¹¹¹ CEDEFOP, "Briefing Note".

¹¹² Blockchains enable the recording of interactions and transfer "value" from peer to peer without need for a centrally coordinating entity.

¹¹³ Alexander Grech and Anthony F. Camilleri, *Blockchain in Education* (European Commission, 2017).

¹¹⁴ ILO, "Distance and Online Learning during the Time of COVID-19", 2020.

learning accounts, would allow workers to use and transfer their credentials across different contexts, complementing coherent pathways to qualifications.

3.4. Renewed attention to WBL

135. WBL refers to learning that happens in a real work environment. Its importance is increasingly recognized for addressing new skills challenges and reducing skills mismatch “on the spot”; its flexibility and suitability for all age groups; and its openness to diverse educational formats and innovations. The most common types of work-based learning are on-the-job components of apprenticeships and internships/traineeships.¹¹⁵

Apprenticeships

136. Countries around the world have placed quality apprenticeships¹¹⁶ high on their policy agendas and have recognized their advantages by establishing a regulatory framework, addressing the status, remuneration, social protection and qualification issues faced by apprentices and reviewing the roles and responsibilities of enterprises and training institutions. For apprentices, the most important benefits are the acquisition of the skills needed by the world of work and the foundation for a lifelong career, resulting in improved employment opportunities and smooth transitions into and within the labour market.

137. In well-functioning apprenticeship systems, enterprises can recoup their investments over time through better skilled personnel and the productivity of learners during training. If apprentices are then hired into regular employment, additional returns arise from immediate high performance upon graduation, improved enterprise culture and higher employee loyalty, thus making apprenticeships an effective means of recruitment.¹¹⁷

138. Apprenticeships are continuously evolving and innovating in response to the global challenges. Apprenticeship systems make use of new technologies. Typical features include the establishment of online platforms that use digital media to reach out, inform and attract apprentices; a provision for online matching of apprentices with enterprises; enhanced learning experiences through digitalized learning media; the use of AI and data analytics to provide early warning about apprentices at risk of dropping out; and mechanisms for monitoring and evaluation of training through mobile logbooks. In some countries, online learning is replacing the need for apprentices to attend schools for an off-the-job training component.

139. The changing work forms and skills sets make apprenticeships an attractive option for people of all age groups and with diverse backgrounds and educational credentials. Some countries have initiated the development of pre-apprenticeship programmes that aim to provide young people and vulnerable groups with the necessary preparation to facilitate their access and retention in a regular apprenticeship programme. In other countries, apprenticeships are accessible at bachelor’s and master’s levels and to adults and older workers. For example, the University of Cambridge offers apprenticeship programmes for

¹¹⁵ IAG–TVET, “Investing in Work-Based Learning”, 2017.

¹¹⁶ As a follow-up to International Labour Conference resolutions and to address the demands from constituents to overcome the challenges in implementing apprenticeships, the Office developed the *ILO Toolkit for Quality Apprenticeships, Volume 1, Guide for Policy Makers* (2017), which explains the concept of quality apprenticeships and its building blocks.

¹¹⁷ UEAPME et al., *The Cost-Effectiveness of Apprenticeship Schemes – Making the Business Case for Apprenticeships*, 2016.

its staff to develop their careers and gain a nationally recognized qualification. The staff remain on their existing salary rather than lower apprentice wage rates.¹¹⁸

- 140.** Women are generally under-represented in apprenticeship programmes, for reasons such as cultural and traditional gender roles, gender stereotyping, safety concerns, sexual harassment and family responsibility. The strategy to improve the inclusiveness of apprenticeship training for women may include setting targets; raising awareness among women, families and communities; reserving training places for women; providing diversity training to staff; making apprenticeships more flexible and affordable; offering childcare facilities; and improving advice and support.¹¹⁹
- 141.** In the informal economy, apprenticeships (usually referred to as informal apprenticeships) are the main pathway for skills acquisition by way of observation, imitation and repetition while the apprentice works with the master craftsperson. The transfer of knowledge and skills is based on an agreement (written or verbal) between master craftsperson and apprentice, in line with local community norms and practices, and such training is not regulated by law.
- 142.** Informal apprenticeships have a number of shortcomings linked to lower quality, lack of structured provision and certification, and poor working conditions. Possible solutions to such challenges include (a) strengthening small business associations to take up the functions of quality assurance and regulation of training; (b) strengthening micro and small economic units by providing training to skilled craftspersons to improve their technical, pedagogical and business skills; (c) ensuring access to business development services and microfinance; (d) improving OSH at work; (e) supplementing on-the-job learning of apprentices with off-the-job learning on related theory and core skills; (f) using written agreements; and (g) providing post-training support for wage employment and self-employment.¹²⁰
- 143.** Upgrading informal apprenticeships can be a win-win, both for enterprises to pursue professionalization (master craftspersons) and for learners to access quality training in the workplace.¹²¹ Well rooted in local norms and traditions, informal apprenticeship systems have been increasingly identified as a priority for building inclusive skills systems in Africa, Asia and the Middle East,¹²² including by addressing decent work and strengthening linkages with small business associations in order to increase the credibility of graduation certificates.¹²³ Bangladesh, Benin, Burkina Faso, Ghana and Zimbabwe have implemented strategies to promote quality apprenticeships in the informal economy.¹²⁴ The United Republic of Tanzania has established a system for RPL that assesses and certifies the competencies of apprentices in the informal economy. While country experience is growing, there is an increased need to more systematically assess improved informal apprenticeship arrangements in order to better understand what works, where and why, as well as to experiment further to provide advice on scalable models. The inclusion of women and other

¹¹⁸ ILO, *ILO Toolkit for Quality Apprenticeships, Volume 2: Guide for Practitioners*, 2020.

¹¹⁹ ILO, *ILO Toolkit for Quality Apprenticeships*, Vol. 1.

¹²⁰ Aggarwal, "Lessons Learnt from Informal Apprenticeship Initiatives in Southern and Eastern Africa", *Apprenticeship in a Globalised World: Premises, Promises and Pitfalls*, ed. Salim Akoojee et al. (Zurich: LIT Verlag, 2013); ILO, "Upgrading Informal Apprenticeship Systems", 2011; and *Upgrading informal apprenticeship – A resource guide for Africa*, 2012.

¹²¹ ILO, "Upgrading Informal Apprenticeship Systems".

¹²² ILO, *Upgrading Informal Apprenticeship: A Resource Guide for Africa*.

¹²³ ILO, *Assessing Skills in The Informal Economy: A Resource Guide for Small Industry and Community Organizations*, 2015.

¹²⁴ ILO, "Quality Apprenticeships: Addressing Skills Mismatch and Youth Unemployment", 2019.

disadvantaged groups deserves special attention – communities and local NGOs should be encouraged to promote such inclusion and enterprises to accept it.¹²⁵

Traineeships or internships

144. Traineeships or internships are an important integration mechanism for young people into the world of work. They are especially relevant for jobseekers and workers who have recently finished or are still completing their studies to acquire work experience and improve employability. Although typically such programmes do not follow a curriculum or lead to qualifications,¹²⁶ given the growing demand for faster response mechanisms to the changing labour market needs, such traineeships and internships could become a “win-win situation” for students and employers in terms of providing short-term and fast top-up upskilling and reskilling opportunities for workplaces or occupations. Possible areas of action could include strengthening key elements to provide for remuneration, working conditions, protection at the workplace, quality assurance and more structured formats of learning, together with the link between internships and better outcomes as part of national training policies and programmes.¹²⁷

On-the-job training

145. On-the-job training is the most common type of WBL and happens throughout an individual’s working life within the normal work environment.¹²⁸ It includes training of employees and informal learning in the workplace, but also takes other forms such as job shadowing, in which students accompany a mentor or worker during their workday. The biggest advantage of on-the-job training for the future of work is its strength to create the “right” industry-based skills and the high likelihood that workers will use them. However, specific incentives or structures must be established to ensure that skills are developed and used effectively in the workplace. Such structures may include financial incentives in a levy grant system for skills development or a range of human resources, management and performance-based practices, as further elaborated below.

The impact of the COVID-19 pandemic on WBL

146. The COVID-19 pandemic has seriously disrupted the WBL programmes for employees, apprentices and interns around the world. According to the findings from a survey on staff development and training,¹²⁹ the training of employees, apprentices and interns has been interrupted in 90 per cent, 86 per cent and 83 per cent of the surveyed enterprises, respectively.

147. While in most cases the focus is on using online learning for continuity of theoretical coursework, some countries compensate WBL with training in school labs, integrated into

¹²⁵ ILO, “Committee for Labour Migration”.

¹²⁶ ILO, *A framework for quality apprenticeships*, ILC.110/IV(1) (2019).

¹²⁷ Niall O’Higgins and Luis Pinedo, *Interns and Outcomes: Just How Effective Are Internships as a Bridge to Stable Employment?* (ILO, 2018).

¹²⁸ IAG–TVET, “Investing in Work-Based Learning”.

¹²⁹ To assess the impact of the pandemic, ten development partners carried out a global online survey of enterprises from 27 April to 5 June 2020.

tutored project modules, through simulations and the use of augmented and virtual reality, although it cannot be seen as equivalent.¹³⁰

- 148.** The most common challenges in delivering WBL online are the lack of adapted training programmes and resources, including time, and the difficulty of delivering practical training, as well as common infrastructure issues and limited digital literacy of users. Governments can take steps in this respect by providing subsidies to enhance access to the internet and by improving connectivity and making it more affordable, while grants can be offered to employees, apprentices and interns for buying equipment for teleworking such as computers (as is the case in South Africa and France). For example, a system of subsidized “micro-internships” could be developed in order to support workers with a lack of previous “platform work” experience.¹³¹ The use of multimodal channels comprising high-tech (e.g. virtual reality (VR) simulators), low-tech (e.g. TV, radio) and no-tech solutions (printed materials) should be promoted to ensure equality in access to training opportunities.
- 149.** With the closure of workplaces, there is increased concern for apprentices and new interns who may need more intensive communication with their employers or trainers to facilitate their adaptation to their programmes. Another key concern is to find new places for apprentices and interns whose enterprises have closed down. Given the disruption to the operation and training activities of enterprises, regulations and guidelines can be revisited and updated with a view to allowing greater flexibility in the recruitment of new participants, assessment and certification. Last but not least, safety and health at work and the general well-being of apprentices and interns require special attention.
- 150.** The crisis has provided evidence of the capacity of some governments to drive quick and effective policy solutions and aligned implementation measures (box 14).

► **Box 14. WBL and apprenticeships: Examples of Member States’ responses**¹

In Austria, an amendment to the Vocational Training Act allows casual work for apprentices in some businesses so that apprentices can telework from home.

Italy is promoting WBL through simulated enterprises and some institutions have trialed “distance internship solutions” so that students undertake real work experience at a distance, executing real tasks under the supervision of staff and with pedagogical support through IT learning infrastructure.

In Ireland, where most apprentices are supported by a Moodle learning platform, the system is being expanded to increase available resources.²

TVET institutions in Latin America have reported that the new generation of e-learning programmes being developed during the pandemic will most likely use more advanced technologies, including gamification, augmented reality, virtual learning environments and simulators.³

The United Kingdom and Australia have introduced wage subsidies for hiring new apprentices.

¹ ILO, “Distance and Online Learning during the Time of COVID-19”. ² European Commission, “EC Survey on Addressing COVID-19 Emergency”. ³ ILO, “Continuing Online Learning and Skills Development in the Time of the COVID-19 Crisis”.

- 151.** It is possible that the current emergency response measures could have a lasting impact on the digitization and learning innovations in skills and apprenticeship systems. The

¹³⁰ OECD, “VET in a Time of Crisis”.

¹³¹ CEDEFOP, “Briefing Note”.

development of practical skills is expected to continue to lag during the crisis. This places even more pressure on skills and apprenticeship systems to develop adequate and flexible learning pathways, including distance and virtual learning.

152. In order to address the challenges in continuing WBL programmes in the face of the COVID-19 pandemic, there is an urgent need for developing comprehensive and innovative policies by governments and social partners. In particular, social partners play a crucial role in scaling up and adapting the provision of training. Policy measures to prevent the loss of apprenticeships and internships could include wage subsidies, payments for social security and insurance contributions and tax deductions for employers.

3.5. Skills utilization and quality skills demand

153. Supply-side interventions only address one side of the skills challenge. The development of skills only achieves more effective labour market outcomes when complemented by appropriate demand-side interventions, both at enterprise level (such as enhanced skills utilization, more strategic positioning of skills development, innovative human resources practices) and at national level, supported by public employment services to identify demand trends and linking skills policies with trade, innovation and development policies. Such measures enable enterprises to increase and target their demand for skills, also allowing their employees to engage in lifelong learning.

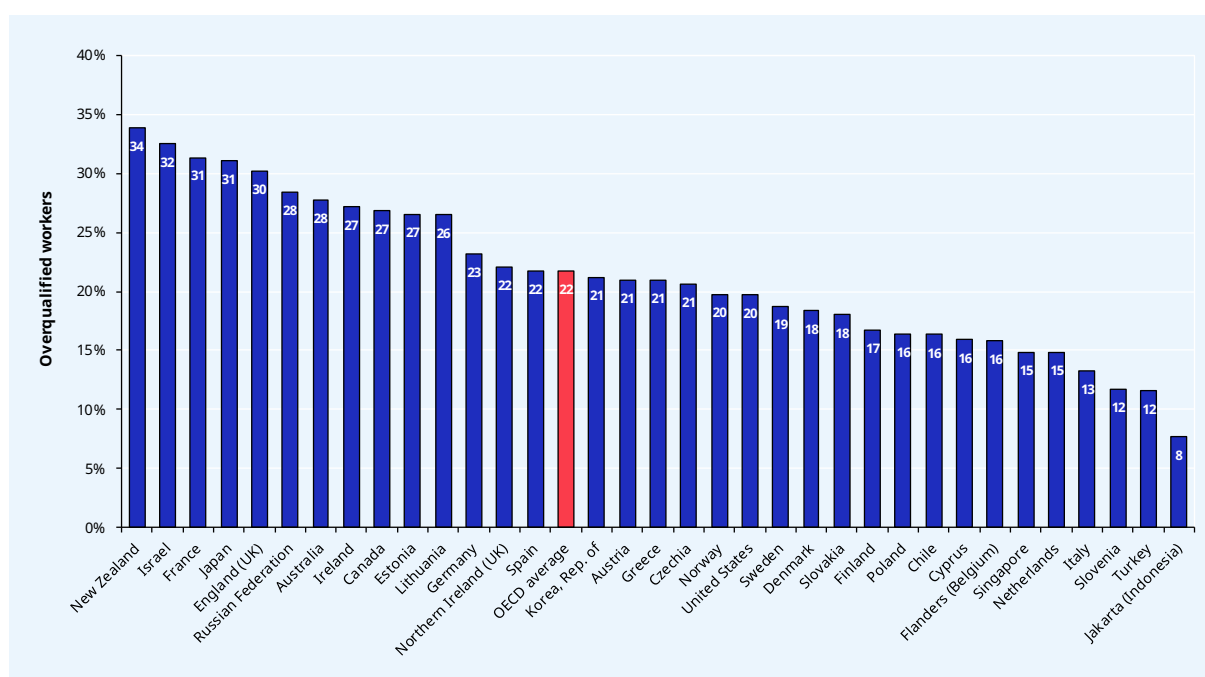
Better use of skills

154. Skills utilization – the extent to which skills are effectively applied in the workplace – is key to support enterprise growth and in turn increase and improve the demand for skills in enterprises.¹³² Historically, most skills systems' reforms have focused mainly on supply-side issues. How skills are activated and used in enterprises is a question that deserves greater policy attention. By themselves, measures to improve skills supply may have little impact on improving the performance of enterprises and economic growth. Initiatives to improve the utilization of skills should be recognized as a priority at local, regional and national levels.
155. Improving skills utilization benefits employers by stimulating innovation and increasing productivity in the workplace and driving business performance. It also benefits workers by increasing job satisfaction and granting the opportunity for continuing training, upward career mobility in the workplace and higher job mobility, in line with the concept of employability enshrined in ILO Recommendation No. 195.
156. Skills underutilization is often linked to the limited understanding of the full potential of in-house skills and how their utilization and further investment in skills can support process and product innovation. Any attempt to address skills underutilization should first identify the extent to which people are over- or under-skilled for the work they undertake – one form of skills mismatch. Figure 16 illustrates existing discrepancies by looking at the extent to which people report a level of educational attainment higher than that required by their job.¹³³

¹³² ILO and OECD, *Better Use of Skills in the Workplace: Why It Matters for Productivity and Local Jobs*, 2017.

¹³³ The OECD/PIAAC Survey of Adult Skills defines overqualification as a situation in which a worker's educational attainment is higher than that required by their job. Respondents are asked what the usual qualifications would be, if any, "that someone would need to get (their) type of job if applying today". Their answer is compared with their actual qualifications. While common, the use of qualifications as a proxy for skill levels should be done with careful interpretation, since overqualified can be under-skilled and vice versa.

► **Figure 16. Extent to which people report that they are overqualified for their current job**



Source: OECD, Survey of Adult Skills (PIAAC) (2012, 2015), table A5.7.

157. Besides identification of skills mismatch in the workplace, tackling the issue of skills utilization requires a broad strategy, addressing issues both within and beyond firms. These start with awareness-raising among employers and engagement with workers to motivate and incentivize low-skilled workers to develop their skills via targeted training offers. Improving recruitment practices, stimulating skills-intensive job creation and ensuring labour mobility constitute important policy measures that complement skills development measures.¹³⁴ They should exist alongside policies that stimulate the business environment, including active labour market policies such as career guidance support, social protection policies such as retirement policies, pay-setting arrangements and family-friendly employment policies. For example, reforming early retirement provisions may improve the expected returns from training older workers, while offering more flexible arrangements for combining study and work may encourage participation in training, especially for women with young children.¹³⁵

Improving skills utilization: Business initiatives and investments to facilitate skills development in the workplace

158. The improvement of human resource management practices and greater investment in people are emerging aspects of a better utilization of skills in enterprises.¹³⁶ The current workforce challenges present significant opportunities for businesses to transform their organizational thinking and improve the link between skills, business strategy and enterprise growth. It is important for the human resources function of enterprises to be

¹³⁴ ILO, *Skills and Jobs Mismatches in Low- and Middle-Income Countries*.

¹³⁵ ILO and OECD, *Global Skills Trends*.

¹³⁶ OECD, "Bridging the Gap: The Private Sector's Role in Skills Development and Employment", 2016.

prioritized and to have a more strategic orientation so that workforce planning and skills development are consistent and better integrated with broader enterprise development and innovation strategies. Successful approaches to attract and prepare current and future workers include the promotion of internship and apprenticeship models at secondary and post-secondary institutions, undertaking skills audits and providing and recognizing non-formal and informal learning at work.¹³⁷

- 159.** The ILO's Sustaining Competitive and Responsible Enterprises (SCORE) programme provides an example of how training and business practices can support productivity growth in small enterprises (box 15).

► **Box 15. Investing in local employee skills: The example of SCORE in Viet Nam's wood products sector**

The ILO's SCORE programme has supported national partners in offering practical workplace training and in-factory consulting. The programme was launched in Viet Nam's wood products sector. The objectives were to enable industry associations and training institutions to market, sell and organize SCORE training in SMEs; enable service providers to deliver effective training and consulting services to SMEs; and increase awareness of responsible workplace practices. Participating SMEs have seen productivity gains of up to 51 per cent, in addition to reducing costs, waste and workplace accidents. Lessons learned indicate that enterprises should develop the internal capacity to develop their workforces rather than rely solely on external trainers; enterprises may need the assistance of public agencies to improve their capacity to deliver training; and enterprises should reduce labour turnover by improving working conditions in order to obtain the full benefits from training.¹

¹ ILO, *SCORE (Sustaining Competitive and Responsible Enterprises): Phase II Final Report 2017*, 2017.

- 160.** The pandemic has provided an important stimulus for more strategic staff management and targeted investment in skills development by showing how developing a digitally skilled workforce is fundamental. This may lead to the re-evaluation of traditional working environments, interactions and methods and the hiring of an on-site workforce.¹³⁸ It is likely that the shock caused by the pandemic will accelerate and consolidate changes in work organization that were already under way, such as IT-enabled remote working, increased use of online meetings, remote human resource management and digital and blended learning.
- 161.** While the current health crisis has underlined the importance of investment in human resources and skills development and provided a potential opportunity to use lockdowns to train employees, there seems to have been little systematic effort to support businesses. According to an ILO/UNESCO/World Bank survey, more than three quarters of the total number of respondents were unaware of initiatives to support learning in enterprises. Despite the reported low level of awareness regarding supportive policies, some encouraging measures have been reported. In some countries, ALMPs, particularly intermediation services and skills training, have been strengthened, and some private initiatives have been designed to improve access to distance learning for those who are at risk or who have lost jobs.¹³⁹

¹³⁷ Deloitte, *Preparing Tomorrow's Workforce for the Fourth Industrial Revolution: For Business: A Framework for Action*, 2018.

¹³⁸ CEDEFOP, "Briefing Note".

¹³⁹ ILO/UNESCO/World Bank, "Taking the Temperature of TVET during the Early Stages of the COVID-19 pandemic", forthcoming.

- 162.** As the pandemic continues, a consensus is growing around the need for concerted efforts by governments and businesses to reskill and upskill the workforce as a key driver to recovery, creating better economies and enhancing resilience to future shocks.

Linking skills policies with growth and development strategies

- 163.** Skills policies can only be successful if they form part of wider social, economic and development strategies that include demand-side policies to create jobs. Such policies need to include strong fiscal and sectoral pro-employment growth measures, which create an attractive environment for skills rich investment and address constraints in the skills ecosystem. Trade and sectoral policies should encourage strategic diversification, restructuring processes and the structural transformation of economies. Innovation policies should link large-scale research and development projects with the innovation potential of the enterprise and its employees. Growth and skills policies can also align to foster the transition of workers and small businesses into formality, especially in the case of young people. The use of targeted investments in training, combined with validation of skills leading to certification, can support transitions into skilled jobs in shortage and a generalized reduction of skills mismatches.

3.6. Towards digitally ready skills systems

- 164.** Digital technologies are among the most powerful drivers of change on both the demand and supply side of the skills dynamic. While digitalization poses significant challenges for education and training systems in terms of preparing learners and workers for the increasingly digitalized world of work, it also provides opportunities to redefine the core characteristics of teaching and learning in terms of who learns, who educates and how and what the learning and assessment spaces and methods will be.¹⁴⁰
- 165.** New technologies can be integrated into delivery, assessment and certification practices to remove barriers to accessing education; attract “second chance” learners; provide better service to learners in remote areas or learners with disabilities; and provide just-in-time learning options for experienced workers who need to adapt to labour market changes.¹⁴¹ Learning through open source software and other online options provide new ways to renew competencies and overcome time and resource constraints. Blended learning, including the use of peer-to-peer networking, social media tools and augmented reality, are increasingly a feature of the learning process.¹⁴² The potential of AI is also evident through automating classroom management, delivering customized learning and assessment processes and enabling teachers and trainers to better respond to the needs of individual learners. Micro-learning and online badges can support the recognition and validation of learning outcomes, while ongoing efforts to digitize learner records are facilitating the mobility of students.¹⁴³
- 166.** The term “ed-tech” is an umbrella term for non-conventional, technology designed to deliver or augment learning (box 16). While initial joint work by the ILO and UNESCO has

¹⁴⁰ World Bank, *World Development Report 2016: Digital Dividends*, 2016.

¹⁴¹ Global Commission on the Future of Work, *Skills Policies and Systems*.

¹⁴² Specific technologies that are changing the way teachers teach include micro-lectures, special applications and websites such as Moso Teach and Ketangpai. The technologies which appear to have the highest impact on TVET staff include mobile communication technology, such as WeChat and Ding Talk. Almost every TVET teacher and student in China has WeChat and key notices are usually sent via WeChat. See ILO, “Guide for Making TVET Inclusive for All”.

¹⁴³ ILO, “Impact of Digitalization”.

examined the unfolding digitalization of TVET and skill systems,¹⁴⁴ further research is needed to identify the most promising niches for investment in digitalization so that positive social change is achieved. Research gaps identified to date include how the use of “ed-tech” can enhance institutional management, widen access and participation, deliver individual learning pathways and contribute to higher completion rates. However, the introduction of technology-driven innovations to teaching and learning is not without its challenges. The introduction of new digital tools in education and training systems should be accompanied by adequate involvement of teachers and trainers so that successful implementation is more likely to occur.¹⁴⁵

► Box 16. Ed-tech tools

Ed-tech tools can deliver content and learning through a range of innovative approaches, such as flipped classrooms and augmented learning.¹ Gamification and alternative reality/VR tools for simulations are allowing different approaches to learning and assessment and learning management systems that support micro-learning are providing new options for certification and digital credentials. Examples of such innovations include the Khan Academy, Knewton and Smart Sparrow.

Another example is Viridis Learning, an education technology enterprise that uses new data analytics to compile a skills map of community college learners and provide direct routes into employment by prequalifying learners for relevant employment through these new skills profiles.² Geekie Lab is another application developed in Brazil with machine-learning capabilities that helps students to work through programmes at their own pace.

¹ Flipped learning means that learning material is provided to students before the course or class takes place, followed by deepening of the acquired knowledge during face-to-face sessions. Augmented learning is an extension of eLearning that enables real-time analysis of the progress of individual learners and customization of ongoing learning tasks to address gaps in learning and performance. Gamification of learning is an approach that motivates students to learn by using video game design and game elements in learning environments. ² WEF, *Strategies for the New Economy*.

167. There is increasing evidence that the digitization of TVET and skills development is reflected in multiple and fragmented policies and actions at all levels of government and skills provision rather than in a single coherent strategy. Many innovations in digital delivery are driven by individual education and training institutions. Such approaches are inadequate to ensure a more strategic approach to the application of digital technology to the operations of TVET institutions, in which digitization is viewed with scepticism by segments of the education and training community. The limited digital competence of teachers and trainers, often as a result of inadequate pre- service and in-service training,¹⁴⁶ continues to reduce the potential digitalization of TVET and skills systems in the coming decade.¹⁴⁷

COVID-19: What has changed and what needs to be done?

168. Since the COVID-19 outbreak, the use of distance-learning approaches has accelerated. Yet, not all countries and education and training providers have been well equipped to switch to online learning.

¹⁴⁴ ILO and UNESCO, *The Digitization of TVET and Skill Systems*, 2020.

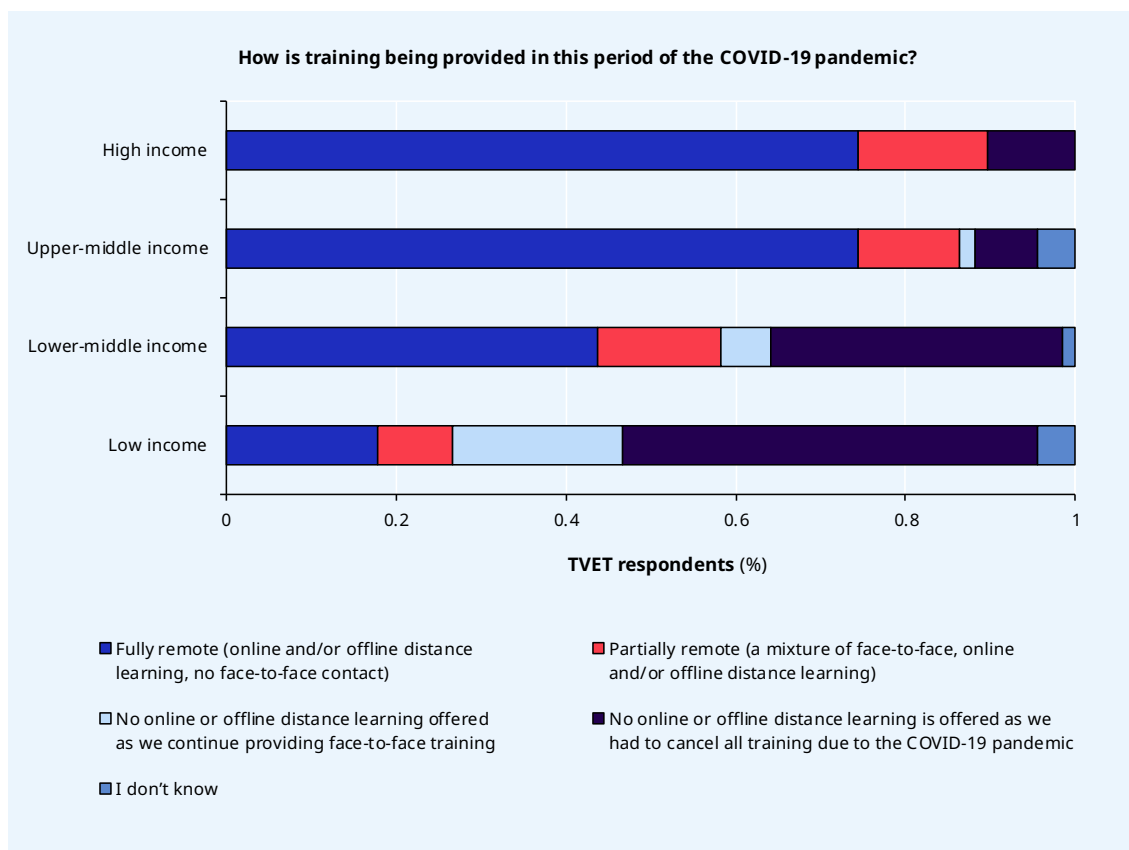
¹⁴⁵ Christina J. Colclough, *Teaching with Tech: The Role of Education Unions in Shaping the Future* (Education International, 2020).

¹⁴⁶ Colclough, *Teaching with Tech*.

¹⁴⁷ ILO and UNESCO, *The Digitization of TVET and Skill Systems*.

169. The findings of an ILO/UNESCO/World Bank survey show that while more than two-thirds of TVET providers reported that they were delivering training entirely at distance during the pandemic, very few in low-income countries were able to make that transition (figure 17). The crisis has clearly revealed the pre-existing gaps in capacity and readiness to adapt to changing learning environments between and within countries, which should be taken into account for future approaches to the digitalization of TVET and skills systems, otherwise inequalities will increase.¹⁴⁸

► **Figure 17. How training is provided in countries by income level**



Note: Respondents from initial and continuing TVET providers represent 92 countries (985 responses from a subsample of 985 comprising TVET providers only: high income (39 responses); upper-middle income (709 responses); lower-middle income (192 responses); low income (45 responses)); raw percentages (unweighted).

Source: ILO/UNESCO/World Bank online survey, 2020.

170. In light of the COVID-19 experience, UNESCO has updated recommendations on effective distance learning solutions¹⁴⁹ along with many other international organizations. They have mapped and promoted good practices for the design of adequate measures and the allocation of resources to education and skills development in emergency mode all over the world. The good practice examples and recommendations address digital readiness in terms of equipment and connectivity; access to digital tools, platforms, apps and content; and last but not least, the limited experience and low level of digital skills among teachers, trainers, managers and education support staff. In particular:

¹⁴⁸ ILO/UNESCO/World Bank.

¹⁴⁹ UNESCO, "COVID-19: 10 Recommendations to Plan Distance Learning Solutions".

- **Connectivity, access and equipment.** The lesson learned is that facilities and infrastructure need to be enhanced as the centres and training providers in many cases had insufficient bandwidth, limited network capacity and outdated digital learning and content management systems. Institutions have found it difficult to ensure digital access and support for particularly vulnerable groups such as those in rural areas and informal workers. Inexpensive or free equipment, such as computers and tablets, and zero rating of internet services and infrastructure will enhance access and programme completion and are among the immediate measures to be provided to learners and trainers.
- **Online platforms and tools.** While online learning is not considered a complete replacement for in-person training, it does help learners to remain engaged and progress in their studies.¹⁵⁰ Education and training institutions require technical and financial support to deploy digital platforms that provide learner and content management functionalities and enable the integration of videoconferencing and VR tools. They need to combine multiple learning channels, including television and radio, to make better use of social media in learning and create single points of access for online content and support services, while respecting data privacy and protection requirements through effective data governance with the participation of social partners. In addition, digital platforms should comply with the Web Content Accessibility Guidelines.

Online platforms and apps are not only spaces for learning but also communities of practice, providing regular human interaction and enabling social capital to address the possible psychosocial challenges that students may face when they are isolated and for teachers to use when overloaded.

- **Capacity development** to education and training institutions is another important supportive measure to provide guidance on how to transition to and develop approaches to online teaching and learning and how to target specific measures for disadvantaged groups. It is important to keep in mind that work–life balance is difficult while teaching or learning at home. There might also be resistance to change and the adaptation might be difficult for users of online learning, both teachers and students, particularly those under time pressure and with limited digital skills. Furthermore, parents do not always have the capacity to support their children in learning at home.
- The crisis has shown that the development of **digital skills** should be a top priority for societies, especially for older cohorts, as learning and working from home will require new skills to adapt to the technologies and infrastructure used. Even advanced, European education systems are underprepared for digitalization, with 40 per cent of EU citizens lacking basic digital skills and less than 40 per cent of teachers and trainers receiving training on educational technologies during their initial teacher education.¹⁵¹ The current situation presents an opportunity for governments, training institutions, employers' and workers' organizations to collaborate more closely to ensure that opportunities to develop the digital skills are available as formal and non-formal learning options for students and workers alike.
- **Online provision.** Even when learners, teachers and trainers do have the required digital skills, they often do not have the experience to effectively use them to facilitate the planning and delivery of courses. Learners may struggle with maintaining engagement

¹⁵⁰ OECD, "VET in a Time of Crisis".

¹⁵¹ ILO, "Distance and Online Learning during the Time of COVID-19".

in digital courses due to lack of a supportive context, previous experience and adequate instructional methods. Continuous communication and engagement with students is important to avoid programme non-completion, as well as to take into account that family issues such as lack of supportive environments, domestic violence and so on may continue to affect learning outcomes during and after the pandemic.

It is important to ensure that quality training is maintained and that required learning outcomes can be achieved and assessed, recognizing the difference between face-to-face and online learning. This includes measures for improving learning design, methodologies and online flexible assessments; enable more flexible learning based on the progress of individual students; monitoring student learning; using tools to support submission of students' feedback and support; and exploring the potential of digital tools to focus on technical and practical skills development. As online provision relies on students' self-learning and self-management skills, this can be strengthened by enhancing the interaction between teachers and students online through innovative teaching activities.

- It is necessary to **adapt pedagogical resources** for distance learning, search for and develop new online content and improve the use of content and learning management systems.
- Government support for the "digitalization" of companies in terms of subsidizing/promoting the development of online services (e-learning platforms, e-commerce, etc.) should be promoted and the access of enterprises to online courses and publicly supported learning platforms should be facilitated.

171. While the pandemic period has created a "massive educational disruption", it has also brought opportunities for innovation, accelerated the use of digital modalities and drawn on untapped skills. It may be considered a "turning point" for how technology can be used in education and skills development as learning providers may be forced to adopt system and technology innovations that will expand the use of distance learning and distance or alternative assessments.¹⁵² It is also expected that the crisis will accelerate the shift to blended, hybrid and distance learning. However, it should be also ensured that technology is used in an effective and inclusive way. To address all these aspects, in many countries and regions a strategic and longer-term approach to digital education and training is being defined.¹⁵³

3.7. Recruitment, training and employment of teachers and trainers

- 172.** Quality education and training can only be delivered by qualified teachers who have decent working conditions and opportunities for lifelong learning so they can maintain and improve their professional practice. This is even more the case given the dramatic shift to distance and online learning as a result of the pandemic.
- 173.** Teachers, trainers, assessors, workplace instructors, tutors and supervisors (hereafter teachers and trainers) play an important role in shaping the next generation of workers and facilitating relationships with business and the wider community. Managers of educational

¹⁵² OECD, "VET in a Time of Crisis"; European Commission, "Digital Education Action Plan 2021–2027: Resetting Education and Training for the Digital Era".

¹⁵³ OECD, "VET in a Time of Crisis"; European Commission, "Digital Education Action Plan 2021–2027".

institutions are also key to ensuring flexible and responsive programming and maintaining dynamic and beneficial relationships with local employers and other service providers. The skills development system relies on their capacity to respond to new and accelerating demands on individuals, firms and society. Therefore, it is critical to ensure that the education and training workforce is equipped with the competences required to provide quality education and training (box 17).¹⁵⁴ Teachers and trainers need to be actively involved in developing the tools and governance of the data to ensure their ownership and effective implementation.¹⁵⁵

► **Box 17. Training TVET instructors for the changing world of work**

In 2015, the Technical Institute for Training and Productivity (INTECAP) in Guatemala created the Instructor Training School, the first of its kind in Central America, with the objective of raising the level of INTECAP's instructors in all their competency dimensions – technical, methodological and attitudinal. The training has been developed based on the understanding that future workers require high-quality training, which in turn requires highly qualified instructors. Instructors need to be prepared to respond to fast-changing professional and training scenarios by adapting their work with new learning tools, methods and technologies. Training is based on the Assessment and Teaching of 21st Century Skills system, adjusted for Latin America by the Inter-American Development Bank and linked to INTECAP's competency-based training model. The programme includes modules on: "Ways of thinking"; "Ways of working"; "Ways of living" and "Tools for working". The duration of training programmes ranges from one to one and a half years, including an in-work training phase at enterprises or training institutions.

Source: INTECAP, "Escuela de Formación de Instructores".

174. Successful practices highlight the importance of developing a national system or a set of measures, using social dialogue and collective agreements, for the development of the TVET and skills workforce to address skills and performance issues.¹⁵⁶ The following should be taken into account:

- Qualifications and curriculum requirements for teachers and trainers should be reviewed to ensure that best practice teaching and assessment methods are included with the other key skills required to deliver training priorities.
- High-standard initial and continuous professional development and capacity-building programmes should be developed for teachers, trainers and institution managers, including to provide the necessary level of technical, pedagogical and digital skills to enable learners to thrive in the knowledge economy.
- Return-to-industry schemes and technical upskilling programmes should be provided to ensure that teachers and trainers are able to deliver industry relevant skills, including entrepreneurship and soft skills, and become lifelong learners themselves.¹⁵⁷
- Training and support should be provided to TVET and skills institution managers to improve the entrepreneurial and outreach capacity of institutions and ensure that they are able to participate in local skills ecosystems, develop strategic and dynamic

¹⁵⁴ ILO Recommendation No. 195.

¹⁵⁵ Colclough, *Teaching with Tech*.

¹⁵⁶ S.D. Broek et al., *Teachers and Trainers in Work-Based Learning/Apprenticeships* (European Commission, 2017).

¹⁵⁷ Nelly P. Stromquist, *The Global Status of Teachers and the Teaching Profession* (Education International, 2018).

partnerships, and deliver the high-quality innovative and customized programmes demanded by employers, learners and the community more broadly.

- Peer-to-peer learning and support networks among teachers and trainers need to be established. ¹⁵⁸
- Involvement of teachers and trainers in dialogue around training policy and practice should be ensured. ¹⁵⁹

- 175.** Moreover, decent working conditions should be ensured, support structures established and recruitment and retention incentives provided in order to raise the status of teachers and trainers and improve the professional image of TVET and skills development in the labour market and in education circles. ¹⁶⁰ These measures are critical because globally the teaching profession is in crisis: an estimated 69 million teachers will need to be recruited at primary and secondary levels by 2030 to ensure that the targets of SDG 4 are reached, while in sub-Saharan Africa a significant proportion of teachers are untrained and are not qualified in their subject matter. Although global statistics on TVET educators are more difficult to obtain, studies indicate that TVET educators face significant challenges, including lower status and wages than teachers in non-TVET institutions; inadequate pre-service training and access to continuous professional development (essential in fast-developing technical fields); lack of career paths and structures; and a high number of fixed-term employment relationships. In addition, TVET educators' ranks are mostly male-dominated and more efforts are needed to recruit female teachers and administrators of education establishments. ¹⁶¹
- 176.** During the COVID-19 pandemic, while the switch to distance learning was made quickly, the process was not always accompanied by support measures for teachers and trainers. Although the provision of digital equipment and the free use of certain communication tools and platforms was offered in some cases, teachers and trainers had to make personal investments in ICT equipment and internet access so they could deliver their programmes online from their own homes. The most frequently cited type of support was capacity-building for the provision of digital content and online training. Given the important role of teachers and trainers, continuous training in digital skills and provision of technical support to teachers and administrators to access and use the tools and processes of distance and online learning are key factors that need to be addressed. Higher quality development and delivery of online learning, digital resources, and management of remote learning, group dynamics and assessment need to be enhanced as well. Additional efforts are needed to equip career counsellors with the latest information on labour market changes and needs, which in turn helps students choose the appropriate learning path to follow.
- 177.** The crisis has revealed many opportunities for teachers and trainers to advance their skills by leveraging new technologies to modernize their ways of teaching and interacting with learners. During the pandemic, it became clear that it is equally important for teachers to be more flexible and to create new methods and materials as they adapt to change. Some

¹⁵⁸ Michael Axmann et al., *Vocational Teachers and Trainers in a Changing World: The Imperative of High-Quality Teacher Training Systems* (ILO, 2015).

¹⁵⁹ ILO, *Final report – Global Dialogue Forum on Vocational Education and Training*, GDFVET/2010/10 (2010).

¹⁶⁰ See ILO/UNESCO, *Recommendation Concerning the Status of Teachers*, 1966, which also covers vocational and technical teachers.

¹⁶¹ Christa Rawkins, *A Global Overview of TVET Teaching and Training: Current Issues, Trends and Recommendations* (ILO/UNESCO, 2018).

countries have provided support to teachers and trainers to exchange their strategies and practices through communication networks and peer-to-peer learning among teachers, using videoconferences, chat groups and emails (Mexico) or through mentorship programmes by teachers who have more experience and can support their colleagues (Canada).

- 178.** Looking ahead, this valuable experience of teaching, training and capacity development is expected to ensure continued operation of TVET and skill systems and better preparedness in the immediate future to lay the foundations for the longer-term transformation of TVET and skills development utilizing digital technologies for learning.

► Chapter 4

Governance and financing of skills development and lifelong learning

179. The continuing realization that lifelong learning is an essential part of social and economic development calls for multi-stakeholder action and a comprehensive policy response to deliver a human-centred approach in a changing world of work. Improved approaches to governance and coordination in TVET and skills systems, combined with appropriate and innovative financing models, are central to operationalize lifelong learning and develop a national skills and lifelong learning ecosystem (see Appendix III). In such an ecosystem, social dialogue (including collective bargaining), strong institutions and clearly defined institutional roles and responsibilities exist, alongside well-functioning systems of coordination, monitoring and evaluation.¹⁶² The engagement of all relevant stakeholders, including workers, employers and governments, is necessary for lifelong learning to become a reality for all.

4.1. Strengthened social dialogue and collective bargaining linked to skills development and lifelong learning

180. Tripartite and bipartite social dialogue, at the national, sectoral, regional, local and enterprise levels, offers multiple entry points for developing relevant skills and employability policies, particularly within a rapidly evolving work and business environment. Convention No. 142 and Recommendation No. 195 call for consultations with social partners in developing policies and programmes on vocational guidance and vocational training. Institutionalized social dialogue mechanisms and procedures are critical for informed policymaking and implementation. They are also key to ensure a human-centred approach.

181. The experience of G20 countries suggests that successful skills policies development and skills needs anticipation systems should include systematic stakeholder engagement. Such an engagement should include strong partnerships between governments and employers' and workers' organizations in all stages and processes of skills development, as required by Convention No. 142 and Recommendation No. 195. The same experience also suggests the need for the creation and sustenance of an institutional platform for social dialogue on skills questions, as well as social partner participation in competent institutions and the definition of coherent policies. Social dialogue has been found to be "central to making skills systems responsive to the needs of industries".¹⁶³ Tripartite sector skills bodies, in particular, are important mechanisms for matching the sector demand for skills training, anticipating future labour market and skills needs, assessing the quality and relevance of training programmes and promoting training in their sectors.¹⁶⁴

¹⁶² Global Commission on the Future of Work, *Skills Policies and Systems*.

¹⁶³ ILO and WTO, *Investing in Skills*.

¹⁶⁴ ILO and OECD, *Global Skills Trends; Approaches to Anticipating Skills*.

TVET councils and other tripartite bodies at national, sectoral level and regional/state level

- 182.** The key to successful skills policies and systems is to connect education and training to the world of work by building bridges. While social dialogue is a key strategy to achieve this, in many education and training systems social dialogue on skills issues is limited or ineffective. To establish more effective tripartite dialogue and cooperation at national, sectoral and local levels requires greater trust among parties and more practical measures that realize the shared responsibility for education and training called for in ILO Recommendation No. 195. Such approaches demand meaningful participation in tripartite planning, policymaking and implementation, acknowledging diversity in representation, the capacity limitations faced by social partners, the financial sustainability of such measures and the need for accountability of outcomes.
- 183.** At the national level, several countries have established TVET councils and/or other national tripartite bodies that coordinate the whole system of data collection and analysis, policy formation and implementation and help align skills demand and supply. Examples of such an inclusive approach can be found in all regions (e.g. in Costa Rica, Hungary, India, Malawi, the Netherlands and the United Republic of Tanzania).¹⁶⁵
- 184.** National approaches to skills development often do not connect with enterprises and initiatives at local or sectoral levels. Sectoral approaches provide a framework for employers, workers' organizations and other key stakeholders at a sectoral level; they make it easier for stakeholders to jointly identify sectoral challenges from a skills development perspective and take coordinated action to address them. Countries have established such sectoral tripartite bodies, which usually provide a more direct link between the training system and the labour market; ensure that training in the respective sectors meets the needs of employers, workers and society more generally; and promote skills development in those sectors. Sectoral skills councils, for example, are sector-based bodies that bring together training institutions and providers with employers' and workers' representatives. They represent one way to address coordination challenges by establishing a forum at a sectoral level for action by employers and workers. Sectoral skills bodies seek to identify, develop and promote the needed skills in different sectors. They complement national-level policies to support skills development by providing stronger insight and targeting to training offers and financial incentives, rather than providing a rationale for broad reforms of national education and training systems.
- 185.** In many countries where the tradition of social dialogue is strong (for example, Canada, Germany and the Netherlands), the social partners have initiated the creation of sectoral bodies or assumed some of their functions. In Ghana, the Council for Technical and Vocational Education and Training has an Industrial Training Advisory Committee with five subcommittees that represent various key skills areas. In Bangladesh, five industry skills councils have been established for information technology, tourism, transport equipment, agro-food processing and leather and leather products. Similar bodies or "sector working committees" have been established in the construction sector, the light engineering sector and the ready-made garments sector, as well as the informal economy. Institutional structures that support sector skills development in countries can be accompanied by sector skills plans that outline actions to be implemented over a certain period.

¹⁶⁵ ILO, *Social dialogue and tripartism*, ILC.107/VI (2018).

186. Good practices ensure the connection between the national, sectoral, state and enterprise levels as they need to act together to be successful. In Switzerland, for example, VET concerns all partners at enterprise level and is a subject for social dialogue. The dual systems of Switzerland and Germany, which combine institution and workplace learning, involve extensive participation by enterprises, employers' and workers' organizations, government ministries and relevant regional and sectoral bodies, and assure social dialogue for skills development at all those levels.
187. Consultative mechanisms on industry skills in Australia help identify needs, evaluate the skills system and provide certification and accreditation. At the state or territory level, industry advisory boards work with training authorities to oversee the regulation, policy, delivery and funding of training and are composed of representatives of businesses and workers. The success of Singapore's Workforce Skills Qualification system also stems from well-coordinated tripartite consultations.

Collective bargaining

188. The inclusion of skills and lifelong learning provisions in collective agreements, as encouraged by Recommendation No. 195, is more common today than in the past; however, it remains an exception, especially in less developed countries. In the past, employers were often reluctant to discuss such issues as part of collective bargaining processes as there was a risk that this would entail additional cost. For workers, skills issues were often secondary to priority discussions, such as wages and working conditions. Encouragingly, despite its slow rise in importance, skills development is one of the topics in which strategic understanding and consensus between social partners can more easily arise.
189. The driver behind the increasing trend to make skills-related issues a part of collective agreements is the rising awareness that lifelong learning must be a reality to allow both workers and employers to adapt to a dynamic labour market with shifting skills needs. In addition, in ageing societies the shrinking young population creates additional pressure on enterprises to reskill and upskill older workers. Including skills and lifelong learning issues in collective bargaining agreements also widens the set of issues to discuss and thereby opens the door for new compromises in negotiations.
190. The new interest to include skills and lifelong learning provisions in collective bargaining processes and agreements is especially common in EU countries and in countries in Latin America (box 18). Elements of negotiation include questions of financing; time dedicated for training; roles and responsibilities; and participation of social partners in the design and implementation of systems to ensure high-quality learning opportunities for skilling, reskilling and upskilling.¹⁶⁶

► **Box 18. Collective bargaining agreements on skills and lifelong learning, some country-level examples**¹

Ireland: The agreement of social partners in Ireland's TOWARDS 2016 programme is the result of collective bargaining at the national level, focusing on manufacturing industries and providing recommendations for enterprise level interventions. It includes the development of a targeted guidance, learning and training programme to include coaching and mentoring for workers in

¹⁶⁶ Veronika Philipps, *Die Bedeutung von Institutionen für die Weiterbildung Älterer: Eine vergleichende Studie erwerbsbezogener Weiterbildungsteilnahme in Europa* (Springer VS, 2019).

vulnerable employment; measures for the promotion of apprenticeships for older workers; and the mainstreaming of a knowledge economy skills passport, focusing on computer literacy, science and technology fundamentals, basic business skills and innovation and entrepreneurship.²

Italy: In Italy collective bargaining led to a “right to training” for metalworkers in 2016. Employers are required to provide their employees with a minimum of 24 hours of training over three years or a stipend of €300 for training programmes is available to workers from sources outside the firm.³

Sweden: The 2004 collective bargaining agreement between the Swedish Labour Confederation and the Confederation of Swedish Enterprises created a jointly administered employment transition fund that allows workers to apply for financial support for retraining, start new businesses or search for new jobs when large-scale restructurings are anticipated or have taken place.⁴

Argentina: Like many countries in Latin America, there is a rather long tradition of coverage of skills and training issues in collective agreements. In the past, bargaining happened on two components: the productivity component and the wage component. Skills-related issues were discussed under the productivity component. Nowadays, many industries have provisions on skills and training in collective agreements that are updated on a regular basis during negotiation rounds. Besides funding and entitlement issues, provisions include the request to give priority to filling vacancies with trained personnel and recommendations for financial education support for children of workers.⁵

¹ Examples chosen based on whether bargaining agreements contain innovative elements, among many other available examples. ² Tony Dobbins, “Ireland: Collective Bargaining and Continuous Vocational Training”, Eurofound, 5 February 2009. ³ SUNI, “WORKERS’ REPS 4.0: The Handbook”; WEF, *A Global Standard for Lifelong Learning and Worker Engagement to Support Advanced Manufacturing*, 2019. ⁴ SUNI, WEF, *A Global Standard for Lifelong Learning*. ⁵ Fabio Bertranou and Luis Casanova, *Labour Institutions and Labour Market Performance in Argentina* (ILO, 2016).

- 191.** There are a number of examples of collective bargaining agreements that include skills and lifelong learning components at the sectoral level. At the national and multisectoral levels, examples are less common. Unfortunately, in most cases, such agreements are not necessarily reflected in collective bargaining agreements at the enterprise level.¹⁶⁷ In cases where collective bargaining has led to commitments in the areas of skills and lifelong learning, there has been a clear increase in the participation of workers in such programmes and programmes funded by governments seem to have been especially successful.¹⁶⁸

4.2. Defining and agreeing roles and responsibilities among governmental institutions, social partners, training providers and individuals

- 192.** Governance and implementation of a skills system to establish an integrated lifelong learning ecosystem demands a shared approach by key stakeholders at the national, regional, local, institutional and sector levels. Allocating tasks, roles and functions among social partners, national institutions, regional authorities, municipalities, providers and learners for the development, implementation and governance of skills policies is extremely challenging and complex. Decentralization, where it exists, adds an additional layer of complexity but is also an opportunity to bring decision-making closer to the final beneficiaries – learners and businesses.

¹⁶⁷ ILO, *Workers’ Organizations Engaging in Skills Development*.

¹⁶⁸ Bridgford, *Trade Union Involvement in Skills Development*.

A whole-of-government approach

193. Taking steps to implement lifelong learning demands a broad perspective that sees all learning activities as part of a national skills ecosystem in which lifelong learning provides the organizational principle. This perspective allows analysis of challenges and priorities of diverse sectors, ministries, administrative and geographic level in a coherent and articulate way. The ultimate goal of well-coordinated lifelong learning is to ensure the availability of quality training for all individuals at all stages of their lives. Training offers need to address the needs and aspirations of individuals –whether they are employed, unemployed or inactive – and potential learners need to be made aware of learning opportunities. Enterprises, in turn, need to be able to access clear information about relevant training offers and appropriate financing and be supported in entering understandings with workers to increase their participation in training.
194. In that sense, it is important to take a coordinated whole-of-government approach,¹⁶⁹ not leaving the responsibility for the development and implementation of a skills and lifelong learning strategy to only one ministry but making it a fully integrated part of the economic and social development agenda of a country.
195. The challenge for governments is to go beyond coordination of the relevant actors and ensure an appropriate balance of interests through social dialogue and collaboration. The institutionalization of cooperation formats (including consultative committees, TVET councils and other national or sectoral committees that seek to prepare/shape/review/ implement policy at different levels) may be preferable to the use of ad hoc consultative mechanisms. Research shows that this proactive approach is particularly relevant in national contexts in which new partners may be emerging or there is a lack organizational capacity and technical knowledge.¹⁷⁰ Such institutional arrangements should have a clearly stated mandate that moves beyond the narrow responsibilities of a particular policy domain because of the cross-cutting nature of skills development. Approaches to strengthening governance include establishing coordinating ministries, agencies or regulatory bodies whose mandates can even go beyond education and training. These bodies can be responsible for the monitoring of integrated planning frameworks that specify the roles, responsibilities and outcomes of multiple actors (box 19).

► Box 19. Ministry of Skill Development and Entrepreneurship in India

In 2014, the Ministry of Skill Development and Entrepreneurship was established as a coordination institution between central and state agencies, as well as between government departments, industry, training providers, NGOs and other stakeholders. It brought under its authority the Directorate General of Training, the National Council for Vocational Training, the National Skills Development Agency and the National Skills Development Council. One of its first activities was to formulate the National Skills Policy 2015.¹

¹ ILO and UNESCO, *Taking a Whole of Government Approach*.

196. New developments have been observed, although mostly limited to Europe at this stage, with regard to signing transnational company agreements (TCAs) between multinational companies and global union federations. Despite its limited coverage, the main aim of this

¹⁶⁹ This concept is further developed in WEF, *Incheon Declaration and Framework for Action*, 2015; see also ILO and UNESCO, *Taking a Whole of Government Approach to Skills Development*, 2018.

¹⁷⁰ EU, *Investing in People's Competences - A Cornerstone for Growth and Well-Being in the EU*, 2019.

approach is to ensure the employability of workers of multinational enterprises through skills and career development, in the context of enterprise restructuring (box 20).¹⁷¹

► **Box 20. National legislation and TCAs on skills management: A productive interplay**

Since 2005, French legislation has established an obligation for large enterprises to negotiate with trade unions every three years, an agreement on forward-looking employment and skills management. Agreements of this type adopt procedures and measures, such as skills assessment and vocational training, aimed at anticipating or mitigating any negative impacts of enterprise restructuring on workers.

Furthermore, some enterprises (seeking transaction cost savings) have negotiated TCAs that include restructuring and skills anticipation clauses covering their entire value chain.¹

¹ Konstantinos Papadakis, *Restructuring Enterprises through Social Dialogue: Socially Responsible Practices in Times of Crisis* (ILO, 2010); Udo Rehfeldt, "The Renault, Engie (GDF Suez) and Solvay Agreements: the "French Imprint", *Trade Unions and Collective Bargaining in Multinationals: From International Legal Framework to Empirical Research*, ed. Fausta Guarriello and Claudio Stanzani (Franco Angeli, 2018), 209–238; and EU and ILO.

Shared responsibilities including all stakeholders at all levels

197. The failure to involve key partners throughout the complete policymaking cycle reduces their commitment and will constrain implementation, prevent the achievement of results and hamper the establishment of links between skills systems and the labour market. Skills development is the shared responsibility of governments, employers and individual workers, with social partners playing a critical role. It is important to start with awareness-raising to promote the role of skills development in enhancing productivity, reducing inequalities and supporting the engagement of employers and workers. Action should be taken to build social consensus around these issues, with capacity-building of relevant actors to ensure that their full potential is mobilized to design and implement skills systems.
198. It is also important to capacitate and encourage enterprises to strategically generate an environment that encourages their employees to actively develop their skills.¹⁷² Social partners should have the opportunity to become involved in skills development by means of work councils and enterprise agreements. It is at this level that the final implementation of a national skills strategy needs to become a reality, as it should establish a guiding framework for training policies at national, regional, local, sectoral and enterprise levels, ultimately leading to better trained and prepared workers and increased productivity.
199. Training opportunities should be available for individuals and they should make use of cost-sharing solutions to avoid burdening economically disadvantaged groups with the full costs. Training opportunities should not be limited to employed workers and should also be available to those not working, the inactive and out of reach and those working in informal activities and diverse forms of work arrangements. In the later cases, it is important to complement financial support for access to training with activation measures such as career guidance and RPL.
200. In the long term, rather than a "whole of government" approach, a reinforced holistic, "whole of society" approach to education and skills policies can help achieve the goal of people-centred recovery and resilience. The EU has launched the European Skills Agenda

¹⁷¹ EU and ILO, "Database on transnational company agreements".

¹⁷² CEDEFOP, "Skill Development a Shared Responsibility – CEDEFOP Acting Director"; Anthony Mackay, "Learning is a Shared Responsibility".

for Sustainable Competitiveness, Social Fairness and Resilience, which calls for collective action by mobilizing business, social partners and stakeholders to commit to working together in investing in people.¹⁷³ One of the new EU initiatives, the special Recovery and Resilience Facility, is expected to mobilize a strong tripartite engagement, with a clear focus on skills development for green and digital recovery. The ILO is supporting Member States in Africa, Asia and Latin America to apply its guidelines in this area.¹⁷⁴

4.3. Financing skills development and lifelong learning

- 201.** Investing in people's capacities, labour market institutions and businesses for sustainable and decent work requires adequate funding. Skills policies are more effective and efficient when financing responsibilities are shared among all stakeholders. Some estimates suggest that to achieve the targets of SDG 4 between 2015 and 2030, low- and middle-income countries would need to increase annual spending on education and training from its current level of US\$1.2 trillion to US\$3 trillion per year, an annual growth rate in public education spending of 7 per cent.¹⁷⁵ These are not financial burdens but investments in the future of individuals, enterprises and societies as a whole.
- 202.** Such investments need to be governed and managed transparently, effectively and efficiently. Training funds, whether national or sectoral and depending on their design, can be managed in a bipartite or tripartite manner, comparable to the management of unemployment funds and social security funds. Despite a growing body of evidence, many of the available different financing strategies, incentives and management solutions have not been widely adopted. The evidence available shows that each approach has its own strengths and weaknesses and that certain solutions are more adequate for certain contexts than others. For example, the recent ILO review of levy-based training funds in eight Southern African Development Community (SADC) countries highlighted very different design, management and performance of these funds despite the basic common feature of an enterprise levy. The same study also clarifies a number of barriers and success factors for levy-based funding to be effective. This should become an even stronger part of ILO's research agenda to be in a better position to provide fact-based advice to countries.¹⁷⁶
- 203.** Another important issue to address is the uneven availability of funding opportunities for skills development between young and old people. Traditionally, public funding has been channelled to initial education and training, mostly benefiting school-age pupils and young adults. WBL, especially non-formal learning, frequently does not get financial support, despite its great importance in enterprise-based skills development. Public investment in adult learning, benefiting older workers, the unemployed and inactive adults, has been lower and private investments have historically been more significant. The cost and accessibility of learning are still an issue for disadvantaged groups, including women, people in rural areas, lower-skilled adults, people with disabilities and migrants, who are frequently unsupported and out of reach of standard education, training and employment policies. By the same token, in many countries, financial incentives weakly target enterprise needs and lack sensitivity to specific market segments and niches. SMEs are more seriously affected by weak targeting and tend not to be sufficiently supported, although incentives

¹⁷³ EU, "Recovery and Resilience Facility".

¹⁷⁴ ILO, *Guidelines on Rapid Assessment of Reskilling and Upskilling Needs*.

¹⁷⁵ ILO, *Lifelong Learning: Concepts, Issues and Actions*; UNESCO, *Domestic Financing in Education*.

¹⁷⁶ ILO, "A Review of Levy Training Funds in SADC", forthcoming.

to SMEs are particularly important given their tendency to invest less in training, especially for transferable skills, thus affecting worker mobility and sector growth.

- 204.** Giving financial incentives to training institutions, employers and/or individuals to engage in learning or deliver certain programmes can increase participation rates, but there is a risk of training being delivered without incentives, an effect also called “deadweight loss”. Well-designed incentive schemes encourage the offer of quality training that targets high-skilled jobs and future-oriented skills, as well as the acquisition of core and transferable skills. Incentives and funding strategies can combine demand-led elements with social value, addressing both skills needs of enterprises and the needs of vulnerable groups. An economic growth orientation tends to place emphasis on achieving labour market outcomes and funding tends to be directed towards areas of skills shortage or where there is an increased likelihood of improving employment levels. An orientation towards social outcomes tends to channel funding to the development of core, employability and technical skills of vulnerable groups aiming at higher labour market participation, access to decent work and upward career pathways.

Resource mobilization, pooling and sharing

- 205.** Financing is an essential element of good governance. The availability of monetary resources determines the affordability and sustainability of lifelong learning ecosystems. Systems of financing – including the ways and means by which resources are collected, allocated and managed – are essential structural factors in the effectiveness and efficiency of delivery. Mobilizing resources is the responsibility of all stakeholders involved (public institutions in the first instance, as well as private organizations and businesses, individuals, training institutions, among others). Despite their proven efficiency, local and sectoral arrangements to mobilize funding and organize financial incentives for training often do not exist. Institutional budgets, enterprise training funds and the funding of programme initiatives are often not designed to allow for more flexible funding and cost-sharing arrangements. A number of financing instruments (including training funds) can be established, developed and improved to maximize their positive impact:
- **Government budgetary funding** is usually the most significant source of funds for public TVET providers and is typically allocated via direct payment of staff salaries and annual budgetary payments or by ad hoc or recurrent grants to providers. It is usually driven by the current (or past) supply of skills and its associated inputs (such as number of students, number of teachers or number of courses). Resource mobilization reforms tend to focus on diversifying funding sources, cost-sharing and cost-recovery measures.
 - **Training funds** are an increasingly popular approach to mobilize funding for skills development; however, they do not always function well due to weak governance, low transparency on how finances are spent and insufficiently targeted programming. They are dedicated funds, outside the usual government budgetary channels, which are typically financed by enterprise levies (a dedicated tax on enterprises principally used to raise funds for training purposes) but may also receive contributions from governments and other donors. Training funds may be national or regional, sectoral or industry-specific. Good practices suggest that they work better in countries where formal industry is well-developed, social dialogue is working and administrative or organizational

capacity is good.¹⁷⁷ Known issues of funds include (a) clarity of objectives: funds may be diverted for purposes not connected with original objectives; (b) governance: in many cases, governments treat training funds as an extension of national budgets and expenditures, which may reduce employer commitment and engagement on skills development, (c) insufficient involvement of SMEs, especially in the informal economy; and (d) insufficient oversight and transparency.¹⁷⁸ More effective bipartite or tripartite monitoring and implementation oversight can improve the effectiveness of the funds and ensure that employers and workers are suitably engaged and committed to their ongoing implementation.

- Governments may provide direct support to individuals through various targeted **subsidies, loans, individual learning accounts, saving schemes and a variety of incentives** in order to encourage participation in training and better respond to the needs of learners and make VET and lifelong learning affordable.¹⁷⁹ Such programmes may also include other support services, such as career guidance, coaching support, meals, free transport, flexible timings and training periods, as well as childcare support for women or learning tools and equipment for people with disabilities.¹⁸⁰ In more developed systems, there is also growing interest in the concept of individual learning entitlements regardless of an individual's employment status (box 21).¹⁸¹ However, at this stage there are only a very small number of schemes that provide full entitlements to lifelong learning and the evaluation evidence of their success and suitability for developing country contexts remains limited.¹⁸² The successful development of individual learning entitlements is dependent on resolving fundamental issues in the development of lifelong learning, such as improved coordination and governance, sustainable financing of adult learning and improved access to training solutions.

► Box 21. Innovative mechanisms for financing lifelong learning

Several innovative mechanisms for the financing lifelong learning of individuals already exist, notably in France, Singapore, the Netherlands and the Nordic countries. In France, for example, the Personal Learning Account scheme enables all active workers (including the self-employed and civil servants) to receive up to €500 per year (with a lifetime ceiling of €5,000). Workers can spend this money on a course of their choice to gain new qualifications. In 2016, nearly €1.8 billion was allocated to this scheme.¹

In Singapore, a similar funding scheme or “skills future credit” allows all citizens 25 and over to receive credits of US\$350 in their personal learning accounts, which do not expire and can accumulate as the Government provides periodic supplements but may be used only for government-approved courses.²

In late 2019, the Netherlands planned to reintroduce its “individual learning accounts” scheme to promote lifelong learning, with public and private funding (with incentives such as tax exemptions

¹⁷⁷ ETF, *Financing Work-Based Learning as Part of Vocational Education Reform: A Handbook for Policy Makers and Social Partners*, 2018; Richard Johanson, *A Review of National Training Funds* (World Bank, 2009).

¹⁷⁸ ILO, “A Review of Levy Training Funds in SADC”; “Guide for Making TVET Inclusive for All”.

¹⁷⁹ OECD, *Skills Strategy 2019: Skills to Shape a Better Future*, 2019.

¹⁸⁰ ILO, “Making TVET and Skills Systems Inclusive of Persons with Disabilities”, 2017.

¹⁸¹ ILO and UNESCO, *Taking a Whole of Government Approach*.

¹⁸² See OECD, *Individual Learning Accounts*, which identifies only four systems of full entitlements in OECD countries: the Individual Learning Account in the United Kingdom; SkillsFuture Credit in Singapore; the Chèque Annuel de Formation in Geneva Canton (Switzerland); and the Scottish Individual Learning Account (until October 2017).

for businesses), which will be based on cooperation between the Government, employers' and workers' organizations, development funds and executive agencies.³

¹ CEDEFOP, "Financing of Education and Training". ² Joanna Seow, "Most Trainees Find Skills Training Useful for Work: Poll", *The Straits Times*, 12 February 2019. ³ CEDEFOP, "Financing of Education and Training".

- Skills development is often financed through **co-financing arrangements**, drawing on sources such as government budgets, student fees and the private sector. Other sources include employee contributions, private donations, income-generating activities and external assistance.¹⁸³ Easing the burden on public funding can be achieved by striking a better balance between public and private responsibility for financing training.¹⁸⁴ Private sector funding is often considerable: For example, in 2015 in the EU, private sector enterprises with at least ten employees (about 50 per cent of all jobs) invested €60.6 billion in employee training. Public sector employers (nearly 25 per cent of all jobs) or microenterprises (nearly 30 per cent of all jobs) likely invest in training at comparable levels.¹⁸⁵ Incentives for the private sector to engage in funding can be ensured through their strong involvement in the design and governance of skills development systems.
- **Public-private partnerships** are another way to mobilize resources and take many forms in TVET; they operate on a cost-sharing principle, in which private sector resources, in the form of direct funding, in-kind support or direct provision, complement the public funding of different aspects of education and training within national skills development systems. Public-private partnerships have delivered, for example, the co-creation of new national qualification and curriculum profiles, sector-specific training initiatives to address new market requirements and direct sponsorship of individual institutions by local enterprises.¹⁸⁶
- Cost-sharing, applied in a proportioned and adequate way, as a method of mobilizing resources also includes **tax incentives** (typically tax credits or tax allowances) for both enterprises and individuals;¹⁸⁷ **education and training leave**, which frequently encourages sharing of training costs between workers and employers; **payback clauses** to incentivize enterprises to provide training and training leaves; **vouchers and other grants** for individuals or enterprises, which allow for greater targeting and outreach; and **loans to individuals** for continuing education and training. Equitable access, with particular attention paid to vulnerable and marginalized communities, should be considered in incentive design, since certain incentives, such as loans and some types of tax incentives and grants, tend to favour those who already have the best access (box 22).

► Box 22. Tax incentives

Tax incentives for education and training by the private sector are used in many EU Member States. The tax treatments of education and training expenditures substantially differ among EU Member States, many of which provide employee social security contribution reductions or (tuition) tax credits and deductions under their personal income tax systems to encourage private skills investment (such as through learning accounts). Many EU Member States also allow enterprises

¹⁸³ Palmer, "Financing Technical and Vocational Skills Development Reform".

¹⁸⁴ Global Commission on the Future of Work, "New Business Models for Inclusive Growth" (ILO, 2018).

¹⁸⁵ EU, *Investing in People's Competences*.

¹⁸⁶ UNDP, *Best Practices Guidelines and Toolkit on Engaging the Private Sector in Skills Development*, 2017.

¹⁸⁷ CEDEFOP, *Using Tax Incentives to Promote Education and Training*, 2009.

to deduct training expenses under their corporate income tax systems, while others apply employer social security contribution reductions or corporate tax incentives for apprentices. It is important to ensure that such incentives do not cause economic distortions. Tax incentives that are not targeted or means-tested may favour large enterprises, high-skilled individuals and those with the best access to education and training.¹

¹ EU, *Investing in People's Competences*.

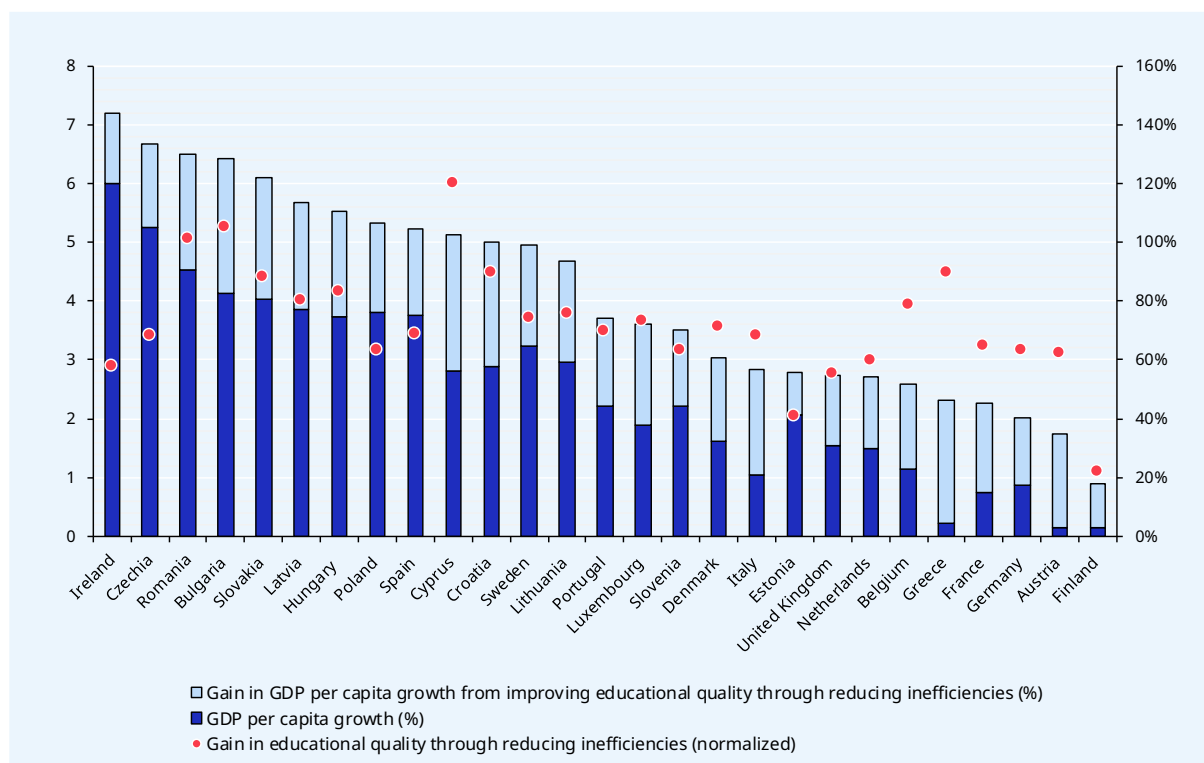
- 206.** Governments should create favourable policy, regulatory and administrative climates, in which private financing and other forms of financing can flourish alongside public financing. Among other things, the regulatory environment should facilitate – not hinder – the establishment and operation of public and private training providers. Investments should be directed away from areas that already experience overinvestment towards areas that experience private or public underinvestment. Quality assurance and accreditation systems should be able to regulate and assess agreed minimum standards of public and private providers. The “private” partners in public–private partnerships are often larger, formal enterprises; governments should encourage intermediaries or associations to bring smaller enterprises into such partnerships as well.

Effective and efficient spending of funds

- 207.** From a lifelong learning perspective, it will be important to move away from current expenditure patterns on skills development to ensure that funds are allocated across the life cycle and do not focus on young people to the detriment of adult workers. Estimates indicate that EU Member States invested 0.1–0.5 per cent of gross domestic product (GDP) in adult skilling, reskilling and upskilling, while investing 4–6 per cent of GDP in initial education and training systems.
- 208.** The link between financing and the achievement of national skills development reform objectives is not always explicit. Reform measures related to effectiveness (such as quality of training and labour market outcomes of trainees), efficiency (such as outputs per unit cost) and equity (such as the degree to which people from different backgrounds and locations have access to high-quality training) need to be linked with policy objectives across different policy areas.¹⁸⁸ Resource distribution should correspond to the identified gaps and needs. They should be allocated in ways that allow for the effective functioning of the agreed roles and responsibilities of the different actors at different levels of the system, which are otherwise often hampered by inflexible and centralized funding mechanisms.
- 209.** The gains from more efficient use of public investment in education and training may be substantial (figure 18).

¹⁸⁸ Palmer, “Financing Technical and Vocational Skills Development Reform”.

► **Figure 18. Effective and efficient investment in education and training can substantially raise GDP per capita, 2015**



Note: Empirical analyses suggest that by removing all existing inefficiencies (compared to an EU-wide best performer), PISA science scores in EU Member States could be increased by the amount indicated by the red circles. This increase in PISA scores would imply an increase in annual real GDP per capita growth indicated by the dark blue part of the bars (corresponding to 0.4 to 1.6 percentage points across EU Member States).

Source: EU, *Investing in People's Competences*.

210. Interest has increased recently in several specific financing mechanisms that should be applied in a coherent framework, including:

- **Performance-based financing** – financing mechanisms whose funding formulas include financial incentives that are aligned with desired effects. This can help motivate stakeholders involved in training and post-training support to achieve specific skills development-related objectives (increased targeting of underserved and marginalized groups; higher rates of course completion; higher rates of employment/self-employment three or six months after completion of training).
- **Results-based financing** – financing mechanisms that reward specified outputs or outcomes (results) by providing payment only after verification of delivery.
- **Social impact bonds and human capital performance bonds** – debt instruments issued by the government, providing capital to fund skills development projects for generating social outcomes.

Financial responses to the pandemic

211. Researchers have estimated that GDP could be 1.5 per cent lower on average for the remainder of the century because of learning loss that will lead to skill loss and the correlation between skills and productivity, applicable for the cohort currently in schools

and affected by the school closures.¹⁸⁹ This should be considered in the crisis responses and post-COVID-19 economic recovery measures for mutually reinforcing the interdependence between greater investment in people's capabilities and skills and increasing employment, productivity, social inclusion and sustainable development in order to provide much-needed boost to realize the 2030 Agenda.¹⁹⁰

212. Since the beginning of 2020, governments have launched unprecedented fiscal and monetary packages to counter the economic and social impact of COVID-19, at a total value of about \$9 trillion,¹⁹¹ with some of the resources allocated to support skills-related responses:

- **Investments to support the transition from traditional to online courses** have been targeted primarily at vulnerable populations, as the most exposed to the lack of connectivity, and aim to reduce inequality in access of young people to education and training.
- Additional investment in **ICT and digital solutions** (including IT platforms for e-learning and tools, and IT trained professionals) has been considered a priority and is likely to remain so.
- In some cases, financial support is provided to **use online courses** (Cambodia, Argentina). Personal development grant applications are offered to teachers and trainers to develop online training, complement support on the use of digital tools and providing best practices for teaching remotely (Nigeria). Hotlines were set up (via internet and telephone) to provide psychological support. In many countries, teachers and trainers continued to receive full pay and also received material support for equipment. Additional funds were allocated to teachers and students for internet access and computers. Guidelines were developed to conduct remote training and relevant reimbursements and subsidies are being provided for remote training expenses.
- Resources are being committed **to and by TVET organizations** to create new materials, deploy new technologies and/or expand the use of online and offline distance learning to build skills. According to a recent ILO/UNESCO/World Bank survey, the committed resources seem to positively correlate with countries' income level, which puts lower-income countries in a more disadvantaged position.¹⁹²

► **Box 23. Examples of supporting VET and skills development**

- Malaysia offered stimulus packages to students.
- Sweden uses a crisis package for jobs and transition with plans to increase funding and support to VET, including distance-learning providers in higher VET.
- In the United States, youth apprenticeship readiness grants (US\$42.5 million), planned prior to the crisis but announced in April 2020, are supporting the enrolment of in-school or out-of-school young people (aged 16–24) into new or existing registered apprenticeship and pre-apprenticeship programmes.¹
- In the Republic of Korea, some sectors, facing an employment emergency, receive subsidies for training expenses.

¹ ILO, *ILO–UNESCO-WBG Joint Survey*; OECD, “VET in a Time of Crisis”.

¹⁸⁹ Schleicher, *The Impact of COVID-19 on Education*.

¹⁹⁰ Schleicher, *The Impact of COVID-19 on Education*.

¹⁹¹ ILO, “COVID-19 and the World of Work”, concept note.

¹⁹² ILO, *ILO–UNESCO-WBG Joint Survey*; OECD, “VET in a Time of Crisis”.

- **Special support for apprentices and apprenticeship schemes.** Australia, as part of its economic response to COVID-19, supports 70,000 small businesses to retain their up to 117,000 apprentices and trainees through a new wage subsidy (50 per cent of their wages for up to nine months from January to September 2020).
- **Stimulus packages** have been allocated to businesses and workers in sectors with a dramatic decrease of production activity and turnover and at risk of automation – such as to support the transition of the transport and oil and gas industries into more resilient, future-oriented and higher-skilled sectors such as renewable energy, IT or biotechnology. For example, Scotland introduced financial incentives to employers taking on an apprentice who has been made redundant by another employer, which provides £5,000 to employers in the oil and gas industry and £2,000 to other employers.¹⁹³

¹⁹³ ILO, *ILO-UNESCO-WBG Joint Survey*; OECD, “VET in a Time of Crisis”.

► Chapter 5

Unlocking opportunities for all: Access and transitions

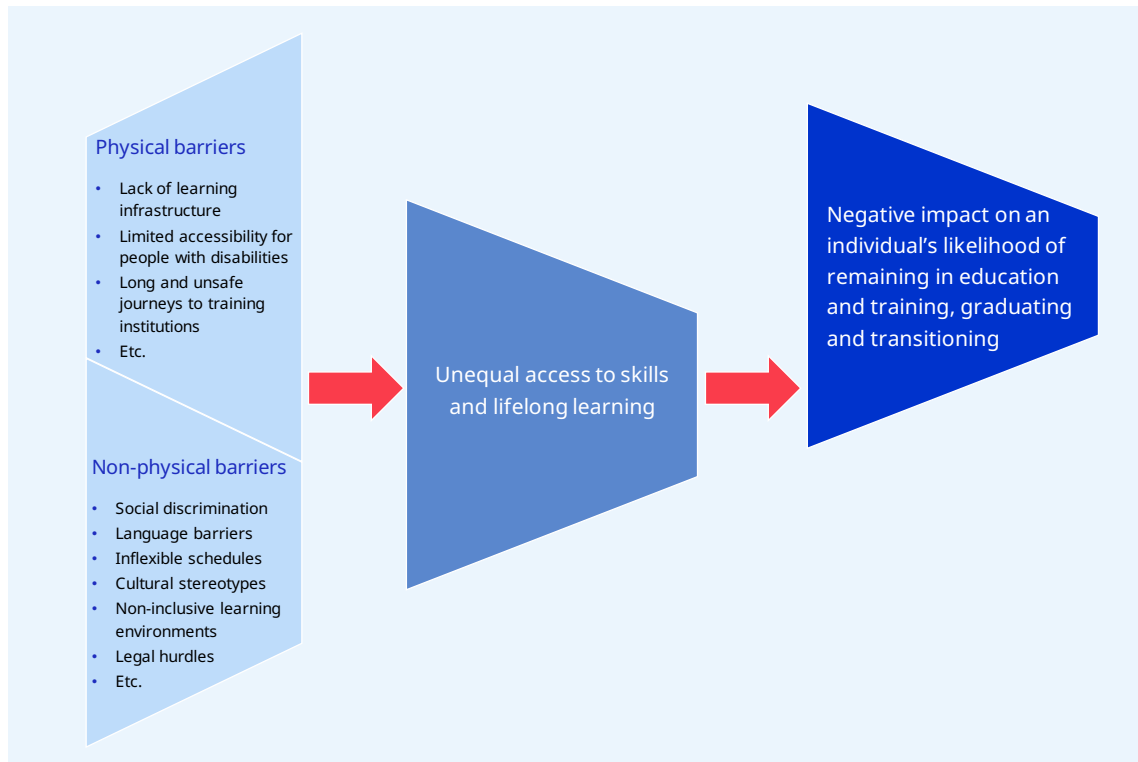
5.1. Promoting the acquisition of skills, competences and qualifications for all workers throughout their working lives

- 213.** Equal opportunity for everyone to access skills and lifelong learning is a key determinant of inclusive and sustainable development. Non-discrimination is one of the ILO's fundamental principles and rights at work ¹⁹⁴ and is reflected in SDG targets 4.5 and 8.5 on equal access to education and training and decent work for all, Convention No. 142, Recommendation No. 195, the Universal Declaration of Human Rights and United Nations human rights treaties. Equality and non-discrimination are also reflected in the "Leaving no one behind" framework of the United Nation System Chief Executives Board for Coordination. ¹⁹⁵
- 214.** Barriers to equal access (figure 19) may arise from a lack of suitable educational frameworks or financial provisions; stereotypes and discrimination; or negative context factors (socio-economic backgrounds, employment status or regional differences, among others). People living and working in rural and remote areas and the informal economy often face multiple barriers. Physical barriers include a lack of learning infrastructure (remoteness from training centres, no appropriate buildings, no female restrooms, for example), limited accessibility for people with disabilities or long and unsafe journeys to training institutions (especially for girls or women). Non-physical barriers include social discrimination (religion, gender, age, disability among others); language barriers (ethnic minorities); inflexible schedules (which place people with care responsibilities at a disadvantage); cultural stereotypes leading to stereotypical choices of trades in TVET; non-inclusive learning environments (lack of female trainers/instructors or training materials); or barriers of a legal nature (refugees, migrants among others).

¹⁹⁴ Equal Remuneration Convention, 1951 (No. 100); and Discrimination (Employment and Occupation) Convention, 1958, (No.111).

¹⁹⁵ UN document [CEB/2016/6/Add.1](#).

► **Figure 19. Physical and non-physical barriers to equal access**



- 215.** These factors contribute to unequal access to skills and lifelong learning and also affect an individual's likelihood of remaining in education and training or graduating and transitioning into decent work and/or from one job to another or from outside to inside the labour market. Dropout rates from education and training in Europe, for example, are influenced by the migrant or ethnic minority backgrounds of learners, their levels of parental support and their health situation, among other factors.¹⁹⁶
- 216.** The closure of schools and training centres and the broader economic impact of the crisis have accelerated some of the inequalities or added new aspects. In many countries, especially in rural areas, internet access is expensive and data access through mobile phones is limited. Infrastructural gaps further deepen inequality in access to education and training among young people within a country and internationally. According to rough estimates, only about 60 per cent of the globe's population is online.¹⁹⁷ About one third of schoolchildren globally were not able to follow any distance education when schools were closed.¹⁹⁸ The lack of internet and devices have made it impossible for disadvantaged groups to access learning and have limited their options to update or upgrade their skills; persons with disabilities, adult learners and other categories of learners report difficulties in using technology, digital content and resources, causing dropouts. Therefore, the digital divide that existed before the pandemic is at risk of widening further. Economic hardship

¹⁹⁶ CEDEFOP, *Leaving Education Early: Putting Vocational Education and Training Centre Stage, Volume I: Investigating Causes and Extent*, 2016.

¹⁹⁷ Joseph Johnson, "Worldwide Digital Population as of October 2020", *Statista*, 27 January 2021.

¹⁹⁸ UNICEF, "COVID-19: Are Children Able to Continue Learning during School Closures?" Fact sheet, 2020.

for families resulting from the pandemic may also increase dropout rates and risk pushing children into child labour.¹⁹⁹

217. Disadvantages in access to education and training early in life often translate into further disadvantages throughout the working life.²⁰⁰ The future of work with increased use of technology, automation and digitalization – while it has great potential to overcome barriers to inclusion – risks widening gender, interregional, generational and income inequalities as a result of unequal access to education and training. Not only does exclusion from skills and lifelong learning opportunities make people less adaptable to changing workplaces and labour markets but it also affects the ability of societies as a whole to undergo structural transformations and innovate. The OECD/PIAAC Survey of Adult Skills also confirms that people with lower literacy levels have a lower likelihood of benefiting from further training during their working lives than people with higher literacy levels.²⁰¹
218. While the fact that disadvantages in accessing skills and learning are perpetuated in working lives is clearly established at country level, there is a lack of global comparable data on the level of exclusion of certain groups or the level of inclusivity of TVET and lifelong learning systems.
219. The ILO promotes inclusive skills and lifelong learning on the basis of non-discrimination as one of the fundamental principles and rights at work. A new ILO guide²⁰² includes a self-assessment tool for policymakers and TVET practitioners to test the inclusiveness of the current TVET system at national, regional or local levels. It is used during capacity-building courses at the International Training Centre of the ILO and is being piloted in three countries.

How to make TVET systems and lifelong learning work for everyone

220. For an inclusive future of work, inclusion needs to be recognized as an explicit policy goal in skills and lifelong learning policies, strategies and frameworks, taking into account the diverse physical and non-physical barriers that lead to discrimination and exclusion.²⁰³ Improving access and transitions for all requires coordination and integrated measures across ministries, employment services, training institutions and workers' and employers' organizations; social protection, financial and non-financial support programmes for individuals or employers; and industrial, investment, technology and environmental policies. As transition pathways become more complex, policy responses need to expand to support people through a wider variety of options, such as inclusive training environments and programmes; flexible learning options, including information and communications technology, mobile and blended learning; career and vocational guidance and individually tailored training and pre- and post-training services; learning entitlements, as mentioned above; active labour market policies; comprehensive and integrated social protection; and skills recognition services.
221. **Inclusive training environments and programmes** are called for in the Centenary Declaration and should follow a universal design approach that ensures flexibility and

¹⁹⁹ ILO/UNICEF, *COVID-19 and Child Labour*, 2020.

²⁰⁰ ILO, *Equality at work: The continuing challenge: Global Report under the follow-up to the ILO Declaration on Fundamental Principles and Rights at Work*, ILC.100/I(B) (2011).

²⁰¹ OECD, *Skills Matter: Additional Results from the Survey of Adult Skills*, 2019.

²⁰² Ralf Lange et al., *Guide on Making TVET Inclusive for All* (ILO, 2020).

²⁰³ ILO, "Making TVET and Skills Systems Inclusive".

accessibility and addresses the empowerment of trainees by taking account of their specific learning needs. Based on a detailed analysis of barriers and consultations, reasonable adjustments should be made in training centres and/or at the workplace and at each stage of the training cycle (enrolment, retention, graduation or assessment). Key strategies include altering TVET curricula and training methods; training and sensitization of instructors in training providers and enterprises on inclusion and diversity; and monitoring the participation of disadvantaged individuals and groups throughout their training.

- 222. Information and communication technologies and mobile and blended learning** are increasingly used as a cost-effective way to mitigate barriers that limit access to quality training and upgrading of skills in remote areas.²⁰⁴ This is achieved by enabling TVET instructors to access a variety of relevant learning materials and monitor the learning progress of learners (using mobile phones), provided that low connectivity does not create additional barriers.
- 223.** Reaching disadvantaged individuals and groups with **timely information about the variety of training courses** and their benefits is a significant challenge in many countries. Countries with strong TVET systems have established information centres and platforms or fairs to inform learners about training offers. In areas with weak skills systems, parents, workers' organizations or youth and other groups have worked with NGOs to reach people in, for example, rural communities.²⁰⁵
- 224. Career and vocational guidance** is a support process that helps people discover training and career options and make decisions to promote their development in different life transitions.²⁰⁶ In some countries, career guidance provisions are integrated in lower secondary curricula and take into account the interests and aptitudes of young people to ensure a smooth school-to-work transition. Employment services also play a key role in providing career guidance and counselling throughout people's work lives. Some governments also provide target-group-specific services through specialized private and non-governmental organizations.²⁰⁷
- 225. Pre-vocational training** offered to people who do not meet minimum entry requirements often include strong WBL and career guidance elements, thus empowering learners and preparing them to join vocational courses or apprenticeships.
- 226.** For learners in vulnerable situations, **post-training support** is especially important to facilitate successful transitions, including training on job-search skills, CV writing and interview skills, job matching and placement, whether provided by employment services and by or in collaboration with the career centres of education and training providers. Local linkages with enterprises and job fairs connect potential employers and enterprises with jobseekers. In North Africa, for example, where university graduates suffer from high unemployment and underemployment rates, the ILO supports career centres at universities in Algeria and Egypt.^{208, 209}

²⁰⁴ ILO and OECD, *Global Skills Trends*.

²⁰⁵ ILO, *Rural Skills Training: A Generic Manual on Training for Rural Economic Empowerment (TREE)*, 2009; OECD, *A New Rural Development Paradigm for the 21st Century: A Toolkit for Developing Countries*, 2016.

²⁰⁶ NEO, *Guide for Providing Comprehensive Career Guidance Services to Disadvantaged Youth* (IDB, 2014).

²⁰⁷ OECD, *Career Guidance and Public Policy: Bridging the Gap*, 2004.

²⁰⁸ ILO, *Youth and Employment in North Africa: A Regional Overview*, 2017.

²⁰⁹ For project examples, see ILO, "University Centers for Career Development"; "Tawdif: De l'université au monde du travail".

- 227. Well-targeted, tailor-made education and training offers** are often implemented in close collaboration with specialized partners (such as NGOs) that provide the required curricula and training materials and teacher training and make reasonable accommodations²¹⁰ to the specific needs of learners. An important component of targeted and individualized training offers is the assessment and recognition of skills acquired through previous learning. This increases the motivation of learners and saves time and financial resources by building on existing skills and then topping up people's skills profiles. **ALMPs** target persons at a labour market disadvantage and play a key role in helping people manage transitions through counselling and targeted labour market training, entrepreneurship, public employment services support and activities, subsidies, among others.²¹¹ **Unemployment protection** plays a key role in supporting life and work transitions. A just transition towards environmentally sustainable economies and societies for all requires effective unemployment protection, coupled with employment services, skills development and other labour market policies in order to enable workers to reskill, if necessary, and transition to another job.²¹²
- 228. Recognizing skills acquired through apprenticeship in the informal economy and other forms of prior learning** is another important way to promote the inclusion of people learning and working in the informal economy and facilitate transitions to formality. The ILO has so far supported the upgrading of informal apprenticeship in ten countries²¹³ and is supporting the establishment or strengthening of RPL systems in seven countries and the SADC region.²¹⁴

5.2. Specific target groups

- 229.** Vulnerabilities depend on various personal and socio-economic factors, often multifaceted and leading to discrimination against women in rural areas, indigenous persons with disabilities and old-age migrant workers, among others.²¹⁵
- 230.** For **workers in rural communities**, skills development is among the main interventions to increase productivity and income, both for farming and off-farm activities supporting manufactured products, mechanization, speciality agriculture products and services. Often, the poor foundation skills of both boys and girls jeopardize further learning. Providing literacy and numeracy training along with skills training is a targeted measure that gets results. Through **community-based training**, such as the well-tested Training for Rural Economic Empowerment (TREE) methodology of the ILO that has benefited about 20 countries globally, local training providers can deliver relevant training and post-training support. Building local multi-stakeholder platforms for TVET and employment promotion

²¹⁰ Reasonable accommodation is a unique adaptation or support provided by an employer, training institution or other provider that is necessary for an individual with a disability to participate in training and work processes, such as physical adaptations, changes to a job application process, modification of work schedules or providing or modifying equipment. See ILO, *Promoting Diversity and Inclusion through Workplace Adjustments: A Practical Guide*, 2016.

²¹¹ ILO, *What Works: Promoting Pathways to Decent Work*, 2019.

²¹² ILO, *Guidelines for A Just Transition Towards Environmentally Sustainable Economies and Societies for All*, 2015; *World Employment and Social Outlook 2018*.

²¹³ Including Bangladesh, Benin, Egypt, Jordan, Kenya, Niger, Sudan, Tunisia, the United Republic of Tanzania and Zimbabwe; see Michael Axmann and Christine Hofmann, "Overcoming the Work-Inexperience Gap through Quality Apprenticeships – the ILO's Contribution" (ILO, 2013).

²¹⁴ ILO, *Recognition of Prior Learning (RPL): Learning Package*, 2018.

²¹⁵ Amanda Lenhardt and Emma Samman, *In Quest of Inclusive Progress: Exploring Intersecting Inequalities in Human Development* (ODI, 2015).

and strengthening local governance systems are critical to support the decentralization of TVET systems and the delivery of skills in rural communities.²¹⁶ Community-based training services are participatory and hence have great potential to be needs-based, flexible and inclusive. According to an impact assessment of the TREE programme in Zimbabwe, beneficiaries increased their income by US\$787 compared to non-beneficiaries over the three-year programme period.²¹⁷ Child and health expenditures also increased over the same period.

- 231. Indigenous and tribal peoples**, who have been particularly vulnerable to the COVID-19 pandemic,²¹⁸ may also face discriminatory attitudes in school and training environments, language barriers and the non-adaptation of learning materials to their needs, which can lead to early dropout. At the same time, their traditional knowledge and associated skills are often not recognized. According to the UN, in Latin America and the Caribbean only 40 per cent of indigenous children completed secondary education out of the 85 per cent who initially enrolled.²¹⁹ The ILO's Indigenous and Tribal Peoples Convention, 1989 (No. 169) provides for measures to ensure that tribal and indigenous peoples have the opportunity to acquire education at all levels on at least an equal footing with the rest of the national community.
- 232. People in fragile settings** who are vulnerable to conflict, natural disasters or forced displacement suffer from a lack of training and livelihood opportunities, leading to uncertainty and low levels of investment in skills. As part of the Jobs for Peace and Resilience programme, the ILO is developing a new guide for TVET delivery in fragile settings that has been designed to build the capacity of instructors to deal with mixed groups and actively contribute to social cohesion and peacebuilding within their communities. Mobile or outreach training – an underutilized modality to date – brings training to the doorsteps of marginalized communities, such as to refugees and host communities in Sudan under the PROSPECTS partnership,²²⁰ which otherwise have no or very limited access, such as rural women or communities affected by crisis.
- 233.** For **informal economy workers** who are trained on the job, the certification of their skills and further training opportunities are essential for them to access formal labour markets. Recognizing that informally acquired skills are a significant share of their human resources, an increasing number of countries have improved apprenticeship in the informal economy and started introducing RPL systems that establish continuous pathways between pre-vocational training, TVET and continuous learning programmes.²²¹ In the pandemic, digital learning and training solutions also offer potential to increase outreach to this target group.
- 234. Workers under diverse contractual arrangements**, including platform economy workers, face challenges in accessing training opportunities given that employer-funded schemes often do not extend to them. Self-employed workers usually face high opportunity costs for training and may require multiple skills that are often not on offer. They also lack

²¹⁶ ILO, "Training for Rural Economic Empowerment (TREE)", Information Note, 2017.

²¹⁷ Michée Lachaud et al., "The Impact of Agri-Business Skills Training in Zimbabwe: An Evaluation of the Training for Rural Economic Empowerment (TREE) Programme", *Journal of Development Effectiveness* 10, No. 3 (2018): 373–391.

²¹⁸ ILO, "COVID-19 and the World of Work: A Focus on Indigenous and Tribal Peoples", 2020.

²¹⁹ UN, "Indigenous Peoples' Right to Education", 2016.

²²⁰ ILO, "Partnership for improving Prospects for Host Communities and Forcibly Displaced Persons".

²²¹ Palmer, *Lifelong Learning in the Informal Economy: A Literature Review* (ILO, 2020); and Simon Field and Ava Guez, *Pathways of Progression: Linking Technical and Vocational Education and Training with Post-Secondary Education* (UNESCO, 2018).

information on opportunities for skilling, reskilling and upskilling.²²² Learning entitlements are an important mechanism for ensuring access to skills and lifelong learning.²²³

- 235. Young people not in education, employment or training (NEETs)** are a particularly vulnerable group and have received increased policy attention in recent years, including under SDG target 8.6. ALMPs, pre-vocational courses and “second chance” interventions have proved successful. Combining training measures with counselling, job placement and other employment services has proven most successful in helping NEETs access decent jobs.²²⁴ The provision of labour market services, the combination of training and social benefits and the coordinated actions of ministries of education, labour and youth have supported the scaling up of otherwise fragmented approaches. Evidence demonstrates that effectively targeted measures can have positive impacts on the earnings of young people but are not always in place, especially outside high-income countries.²²⁵ The Youth Guarantee is a commitment by EU Member States to ensure that all young people under 25 receive a high-quality offer of employment, continued education, apprenticeship or traineeship. The COVID-19 pandemic has also affected youth disproportionately, with expected “scarring effects” on their learning and career trajectory.²²⁶
- 236.** The skilling, reskilling and upskilling needs of **older workers** differ across countries and regions. The OECD/PIAAC Survey of Adult Skills, however, clearly shows that 55–65 year-olds consistently demonstrate lower levels of skills in literacy, numeracy and problem-solving skills in IT environments than 25–30 year-olds in their countries. Older workers face greater challenges in foundational skills and in learning and as a result in adjusting to changing workplace environments, in addition to age discrimination. The access of adult workers to higher-level skills training to remain employable remains a highly neglected area.²²⁷ Therefore, it is important that governments expand budgets for both more and better-quality education and training and for lifelong learning and continuing enterprise-based training for workers and adult jobseekers. Online and blended courses for literacy and numeracy, increasingly for vocational subjects, are gaining momentum to close this access gap²²⁸ (box 24).

► Box 24. Upskilling pathways: The EU

Upskilling pathways is a programme that targets low-skilled adults, such as those without upper secondary education, consisting of three key steps: a **skills assessment** to identify existing skills and upskilling needs, often in the form of a “skills audit”; a **learning offer** that boosts literacy, numeracy or digital skills and allows progress towards higher qualifications aligned with labour market needs; and **validation and recognition** of newly acquired skills.

²²² Palmer, “Financing Technical and Vocational Skills Development Reform”.

²²³ ILO and UNESCO, *A Review of Entitlement Schemes for LLL*, 2019.

²²⁴ Jochen Kluge et al., *Interventions to Improve the Labour Market Outcomes of Youth: A Systematic Review* (Campbell Collaboration, 2017).

²²⁵ ILO, *Non-Standard Employment Around the World*.

²²⁶ ILO, *Youth & COVID-19: Impacts on Jobs, Education, Rights and Mental Well-Being*, 2020.

²²⁷ OECD, *OECD Employment Outlook 2019*.

²²⁸ ILO and OECD, *Global Skills Trends*.

- 237. For both young people and adult workers** who lost jobs (reskilling of adult workers – i.e. from hotels and tourism to health) online skills development courses can be offered during the pandemic period.
- 238.** The rehabilitation of **young offenders in prison** is increasingly seen as paramount for peaceful and resilient communities. Young people, mostly from low-income neighbourhoods, are locked in a vicious cycle of poverty and crime. Research demonstrates that unemployment and low pay are key barriers to reintegration; challenges include criminal records and a lack of marketable skills.²²⁹ The UN Office on Drugs and Crime²³⁰ has outlined the benefits of skills training programmes for prison inmates, including a reduction in recidivism and an increase in employment after release. The Inter-American Centre for Knowledge Development in Vocational Training (CINTERFOR) has supported the Programa Justicia e Inclusión in Uruguay, which focuses on improving the rehabilitation and social reintegration of prisoners and ex-prisoners through education and vocational training programmes and also maintains a network of experts on this topic.²³¹
- 239.** Another highly vulnerable group consists of **victims of forced or compulsory labour and at-risk populations**, who can be assisted through skills and lifelong learning interventions. Awareness-raising is the most common of the prevention provisions contained in the ILO's Protocol of 2014 to the Forced Labour Convention, 1930. Mainstreaming the forms, risks and effects of forced or compulsory labour, such as through human trafficking, into education and training curricula, in particular in targeted, non-formal skills programmes of community-based organizations or pre-departure training for migrant workers, would be helpful in this respect. The reintegration of victims should allow access to educational and training opportunities, leveraging existing public services and programmes in high-risk areas. These can include public employment programmes, as well as specialized rehabilitation packages such as grants, skills development, psychosocial support, microcredit and microenterprise development. The ILO has collected good practice examples and developed two global guidelines on the prevention of forced labour through skills and lifelong learning and the reintegration of victims, and capacity-building in collaboration with the International Trade Centre.²³²
- 240.** The main challenges faced by **migrant workers**²³³ in accessing quality training and decent jobs include the underutilization of skills; a lack of employment or training opportunities; a lack of information; and the risk of exploitation of low-skilled workers. The COVID-19 pandemic has led to migrant workers either being trapped in countries of destination or forced to return to their home countries.²³⁴ **Refugees, asylum-seekers and other forcibly displaced people** may also face legal barriers to access training and employment.²³⁵ Where labour migration responds to identified skills shortages in destination countries and skills surpluses in countries of origin, it is of mutual benefit to governments, employers and

²²⁹ PRI, *Global Prison Trends 2018*, 2018.

²³⁰ UNODC, *Line Up Live Up Trainer Manual: Life Skills Training Through Sport to Prevent Crime, Violence and Drug Use*, 2017.

²³¹ CINTERFOR, "Formación Profesional y Privación de Libertad: Apuntes para una Agenda", 2019.

²³² ILO, *Global Guidelines on the Prevention of Forced Labour through Lifelong Learning and Skills Development Approaches*, 2020; *Global Guidelines on the Economic Reintegration of Victims of Forced Labour through Lifelong Learning and Skills Development Approaches*, 2020.

²³³ According to ILO global estimates, there were 174 million migrant workers in 2017.

²³⁴ "ILO, "Protecting Migrant Workers during the COVID-19 Pandemic: Recommendations for Policy-Makers and Constituents", 2020.

²³⁵ ILO, "Protecting the Rights at Work of Refugees and Other Forcibly Displaced Persons during the COVID-19 Pandemic: Recommendations for Policy-makers and Constituents", 2020.

workers in countries of origin and countries of destination and along migration corridors. Skills development and recognition of migrant workers prior to, during and after migration supports labour market integration and skills utilization. Training measures may include pre-departure training, including intercultural and language training, and core skills. Upgrading training to the level demanded in countries of destination may also benefit national skills systems, provided that these skills are also relevant for local labour markets. The usually higher costs of these programmes should be shared between governments, employers and migrants and should not become a “back door” to the collection of recruitment fees. Employment services play an important role in providing career guidance and counselling in both countries of origin and countries of destination. Systems for bilateral or multilateral recognition of foreign qualifications often remain burdensome and slow to facilitate effective labour market integration. The ILO supports countries in strengthening RPL systems for migrant workers, including upon return.²³⁶ In collaboration with UNESCO, the International Organization for Migration (IOM), the International Organisation of Employers (IOE) and the International Trade Union Confederation, the ILO has forged a global skills partnership on migration and has supported the development of skills partnerships between countries and employers’ and workers’ organizations in West and Central Africa.

- 241. People with disabilities**, through the Convention on the Rights of Persons with Disabilities, are advocating for inclusive education and training systems that facilitate access to mainstream skills development, moving away, wherever possible, from special training institutions that often provide lower-level certification and reinforced segregation. However, many training institutions are not prepared to include persons with disabilities, introduce universal designs to ensure information, physical or learning material accessibility and adopt reasonable accommodation measures. Admission requirements pose additional barriers to inclusion. The ILO supports awareness creation among TVET centre staff, capacity-building on disability etiquette, introducing reasonable accommodation by involving persons with disabilities and support through specialized services, if needed, which are critical to change education and training system cultures away from specialized vocational rehabilitation approaches (such as sheltered workshops), using policy guidance and practical tools.²³⁷
- 242.** In countries with a strong online presence, the tendency to offer free or low-cost continuing training is increasing and computers and mobile data packages and telecommunication subsidies have been provided to **poor families**.
- 243.** Education and training institutions perform a crucial function in terms of communicating norms and values, including those relating to sexuality and gender. **Persons of diverse sexual orientation, gender identity, gender expression and sex characteristics** – lesbian, gay, bisexual, transgender and intersex (LGBTI) persons – frequently face bullying and stigmatization, forcing them to abandon training programmes.²³⁸
- 244.** During the pandemic, the most vulnerable groups will continue to require holistic support, which goes beyond skilling – psychological counselling, health support and advice and support for administrative and legal issues. Many of these services can be implemented at

²³⁶ ILO, *How to Facilitate the Recognition of Skills of Migrant Workers: Guide for Employment Services Providers*, 2017.

²³⁷ ILO, “Making TVET and Skills Systems Inclusive”; *Inclusion of People with Disabilities in Vocational Training: A Practical Guide*, 2013.

²³⁸ UNESCO, *Out in the Open: Education Sector Responses to Violence Based on Sexual Orientation and Gender Identity/Expression*, 2016.

a distance using digital tools but the cost and time to develop them may be overwhelming for many support services.²³⁹

- 245.** In the COVID-19 crisis situation, inclusive skills development and lifelong learning opportunities are particularly vital to prevent people from being left behind and maintain their employability and ensure fast recovery for economies and enterprises. In order to be effective and sustainable, such measures need to be in place during the months of the pandemic, but should also span across the recovery period and beyond.
- 246. Ensuring access and quality solutions** for distance and online learning has become of primary importance in order to have everyone on board, particularly the most vulnerable. Unless access costs decrease and quality of access increases in all countries, inequalities in educational outcomes are likely to grow between those connected and those that are not. In this respect, the ILO has highlighted the importance of investing in digital infrastructure and increasing distance and short course learning options for disadvantaged groups through inclusive digital and analogue technologies.²⁴⁰
- 247.** Working solutions have been developed all over the world, varying from **updating curricula and training programmes** for matching skills to increasing demand in sectors (e.g. chemistry, health); **online training for existing workers** for job retention or **job matching and upskilling** for returning migrants or apprenticeship for migrants who lost jobs, to **online platforms to facilitate RPL registration**. Skills recognition, for example, for migrant workers to take up employment opportunities arising in healthcare and other sectors can help meet labour market needs and foster workers' reintegration into jobs in home countries. Peru and Argentina are developing expedited procedures for the recognition of the professional qualifications of Venezuelan migrants in the country of destination, at least for the duration of the response to the COVID-19 pandemic. Trade unions are also cooperating across borders, such as between Malaysia and Bangladesh, on various migrant worker supports, including food distribution. India has sent a medical team to support Kuwait, which hosts about 1 million Indian migrant workers.²⁴¹
- 248.** In most cases, **outreach strategies** need to adapt to the new reality and deploy digital tools to ensure continuity of activities for diverse target groups. Such support should be provided to persons with disabilities using information and communications that are accessible, including sign language interpretation, video subtitles, Braille and accessible digital file formats. These approaches need to be taken up to ensure the shift to online and distance learning does not exacerbate existing inequalities.
- 249. Local employment services** offer support **for SMEs** to promote upskilling and reskilling of their employees during the pandemic, as well as for a number of people who have lost their jobs and are facing a risk of prolonged unemployment and skills obsolescence. Core and employability skills are also being delivered to maintain employability through online training and retraining, alongside intensified counselling.

5.3. Gender equality in skills development and lifelong learning

- 250.** Despite the progress made towards achieving gender equality in many countries in recent decades, the access of women and LGBTI persons to skills, lifelong learning and the labour

²³⁹ UNESCO, *Out in the Open*.

²⁴⁰ ILO, "Distance and Online Learning during the Time of COVID-19".

²⁴¹ ILO, "Protecting migrant workers during the COVID-19 pandemic".

market is still restricted by a range of pervasive sociocultural norms and socio-economic and structural access barriers.²⁴²

- 251.** Barriers to education and training are especially evident in rural, informal and traditional economies, where household chores and care work remain the primary responsibility of women.²⁴³ Safety concerns associated with long-distance travel or poor infrastructures, such as the lack of separate washrooms, may restrain girls from attaining even basic levels of literacy and numeracy. Sexual harassment and gender-based violence in education and training institutions still affect learners and teachers worldwide and may have a strongly negative impact on attendance and learning levels.²⁴⁴ The situation has worsened during the current pandemic, exacerbating existing gender inequalities. Women belong to the groups hard hit by the crisis. The decline in employment numbers has generally been greater for women than for men,²⁴⁵ while the demands on women's unpaid care work has increased, as have incidents of domestic violence. The ILO has paid special attention to gender equality in its response to COVID-19. In order to support governments and social partners in implementing gender-sensitive policy responses to the COVID-19 crisis and recovery phase, the ILO and UN-Women are implementing a joint programme on the theme "Promoting decent employment for women through inclusive growth policies and investments in the care economy". Policy tools are being developed that can be further used at national level to address the gender-specific employment impact of COVID-19, design gender-responsive stimulus packages and support investments in care. They can be included in a comprehensive manner in gender-responsive employment policies that cover policy domains, including monetary and fiscal policies, skills development and ALMPs. Concrete measures include employment retention benefits, which maintain women workers in their jobs, safeguarding their skills and adapting them to the expected changing demand, thereby supporting a fast recovery. Actively involving employers and other relevant partners such as private employment agencies in channeling support to women (and men) in affected sectors and industries can prevent skills deterioration and disengagement from job-seeking.²⁴⁶ The ILO has developed additional entrepreneurial services, including enhanced efforts to promote women entrepreneurship and responsible business practices. As of August 2020, ILO-supported migrant resource centres have provided support to more than 185,000 migrant workers, 39 per cent of whom are women.²⁴⁷
- 252.** Steps should be taken to overcome young women's exclusion from education and training opportunities. Demand-oriented skills training should be provided to help women gain quality employment and advancement opportunities in STEAM-related jobs. Increasing the number of female teachers in "male" trades and the number of male teachers in "female" trades, removing gender stereotypes from teaching materials, organizing "girls' days" in schools and training institutions and gender-neutral vocational orientation, and promoting positive role models²⁴⁸ are other proven measures. In some cases, creating women-specific

²⁴² UNESCO, *Global Education Monitoring Report 2019*.

²⁴³ ILO, "The Gender Divide in Skills Development: Progress, Challenges and Policy Options for Empowering Women", 2020.

²⁴⁴ UNESCO, *Global Education Monitoring Report 2019*; Nelly P. Stromquist et al., *Women Teachers in Africa: Challenges and Possibilities* (Routledge, 2017).

²⁴⁵ ILO, "ILO Monitor: COVID-19 and the World of Work: Seventh Edition".

²⁴⁶ ILO, "Gender-Responsive Employment Recovery: Building Back Fairer", 2020.

²⁴⁷ GB.340/INS/18/6.

²⁴⁸ See ILO, *Breaking Gender Barriers in the World of Work*, 2018.

learning environments in which women feel more comfortable and professionalizing work that is traditionally perceived as female can help move women into the labour market and open career pathways to other occupations. However, re-employment options for women based on their current skill sets, expected occupational changes and reskilling are much more limited than those of men.²⁴⁹

- 253.** Women and men participate in lifelong learning at similar rates, considered broadly, but there are significant differences in the types of learning they pursue and the benefits they gain from it. The Eurostat Adult Education Survey finds that men participate more in work-related learning than women.²⁵⁰ In order for lifelong learning to promote gender equality or redress inequalities, training programmes should be responsive to people's life cycles and adjust their schedules, cost and content to the specific needs of learners in order to overcome access barriers²⁵¹ (box 25).

► **Box 25. Overcoming traditional gender stereotypes**

Women engineers in the occupied Arab territories: Until recently, women civil engineers were often not in supervisory roles in the construction industry in the Gaza Strip. To address this bias, the Skills Development Training Programme for Female Civil Engineering Graduates was launched in 2011, in collaboration with the ILO. Special training for female graduate engineers was organized, involving extensive practical work including work on construction plants for several months. The project helped to change the stereotypical image of women in construction. Most female engineers remained employed by the enterprises after the end of the project.

Mainstreaming gender in Costa Rica: The national training institute in Costa Rica was the first of several national vocational training institutions in Central America to embark on a comprehensive gender mainstreaming strategy, with the objective of improving the employability of women. A detailed gender analysis was conducted, followed by a gender policy that included a five-year action plan for 2013–17. Building on this success, the approach has been copied in other countries in Central America.¹

¹ ILO, "The Gender Divide in Skills Development", 2020.

²⁴⁹ WEF, *Towards a Reskilling Revolution*.

²⁵⁰ Ellen Boeren, "Gender Differences in Formal, Non-Formal and Informal Adult Learning", *Studies in Continuing Education* 33, No. 3 (2011): 333–346.

²⁵¹ Patricia Gouthro, "A Critical Feminist Analysis of the Homeplace as Learning Site: Expanding the Discourse of Lifelong Learning to Consider Adult Women Learners", *International Journal of Lifelong Education* 24, No. 1 (2005): 5–19.

► Chapter 6

The ILO's leading role on skills and lifelong learning

6.1. The ILO's work on skills and lifelong learning: A snapshot of achieved results

- 254.** The ILO plays a leading or coordinating role in the development of effective national training systems, institutions and programmes, through activities such as analytical reports and studies; development of manuals; capacity-building and development; technical advice and support; lobbying; awareness-raising and knowledge- and information-sharing workshops; and design and implementation of new programmes.
- 255.** During the biennium 2018–19 and 2020–21, significant progress has been achieved. Skills and TVET strategies have been developed with a view to better anticipating and adopting training to labour market needs, while new training programmes have been developed and implemented, focusing on strategic sectors, women, youth and other vulnerable groups, and the rural economy. Methodologies such as TREE and STED have been effectively utilized in countries to anticipate skills needs and support rural economy development. The ILO has developed the two-volume *ILO Toolkit for Quality Apprenticeships* and countries have made significant progress in this area. Capacity development for trainers and managers of TVET institutions has been provided for a number of countries. The ILO has assisted SADC in developing regional guidelines for RPL and supported countries in implementing it. The sectoral approach continues to be the ILO's strength: several sector-specific studies have been conducted to support Member States' analysis of skills profiles and skills gaps in strategic sectors and the establishment of sector skills bodies is being supported in more than 12 countries.
- 256.** In line with the Centenary Declaration and the ILO's Strategic Plan for 2022–25, the ILO's Programme and Budget for 2020–21 and the proposed Programme and Budget for 2022–23 describe the ILO's focus with respect to skills and lifelong learning under outcome 5, which is being delivered through increasing the capacity of the ILO constituents to (a) identify current skills mismatches and anticipate future skills needs; (b) strengthen skills and lifelong learning policies, governance models and financing systems; and (c) design and deliver innovative, flexible and inclusive learning options, encompassing WBL and quality apprenticeships. Seven key publications issued in 2020²⁵² contribute to this work. The current COVID-19 pandemic has changed the world of work and the sphere of learning and development in a matter of weeks. It has challenged individuals, employers, workers and training institutions to adapt to distance and online modalities in all spheres of life. The ILO mission in these critical times is to mobilize

²⁵² ILO, "Effective Governance and Coordination in Skills Systems: Towards a Lifelong Learning Ecosystem", 2020; "The Role of Employers in Skills Development Systems", 2020; *Skills Development and Lifelong Learning: Resource Guide for Workers' Organizations*, 2020; ILO and UNESCO, *A Review of Entitlement Systems for LLL*; Lange et al.; ILO, *ILO Toolkit for Quality Apprenticeships, Vol. 2*, 2020; *Digitization of TVET and Skills Systems*, 2020.

its capabilities and unite the efforts of its constituents in addressing the massive needs of the moment and the commitments made in the ILO Centenary Declaration and the 2030 Agenda.

257. Deeply rooted in the international labour standards and the Centenary Declaration, the ILO has structured a broad human-centred framework for social and economic recovery responses to support economy, enterprises, workers and social dialogue.²⁵³

- In July 2020, the Office organized the largest ever online gathering of workers, employers and governments at the **ILO Global Summit on COVID-19 and the World of Work**; 51 heads of state or government and high-level government, employer and worker representatives from 98 countries joined the regional or global sessions.²⁵⁴ The Summit discussed comprehensive measures on stimulating the economy and jobs, supporting enterprises, employment and income, protecting workers and strengthening social dialogue to preserve workers' skills and support economy and enterprises for fast recovery.
- The Office developed an **information hub** summarizing country policy responses by governments and social partners in each of the 187 Member States of the ILO. The hub is updated regularly and serves as a knowledge-sharing platform for constituents. It has been visited more than 162,211 times since it was launched in April 2020.
- The Office has published seven issues of the *ILO Monitor: COVID-19 and the World of Work*, with information on the impact of the crisis on labour markets and estimates of lost working hours globally and by region. The *ILO Monitor* covered such critical topics as: (i) implications for labour income and working poverty; (ii) sectors, enterprises and workers most at risk; and (iii) the impact on workers in the informal economy, young people and women. The publication of the *ILO Monitor* has generated sustained coverage for the ILO in high-profile international media and strengthened the ILO's position as a leader on labour market issues within the multilateral system.
- During the last few months, the **Skills for Employment Knowledge Sharing Platform**²⁵⁵ has held e-discussions and added key references and tools on rapid assessment of reskilling and upskilling needs, distance and online learning, career guidance and WBL during the pandemic to its collection, acting as a vital resource for constituents around the world.
- **The ILO's rapid diagnostic guidelines**²⁵⁶ assist the tripartite constituents in generating immediate, real-time information on the employment impacts of the pandemic. They will be implemented in more than 47 countries in cooperation with the World Bank, the United Nations Development Programme (UNDP) and regional financial institutions such as the Asian Development Bank (ADB), the European Bank for Reconstruction and Development and the Inter-American Development Bank.

²⁵³ GB.340/INS/18/6.

²⁵⁴ GB.340/INS/18/6.

²⁵⁵ ILO, "Skills for employment".

²⁵⁶ See ILO, "Rapid Diagnostics for Assessing the Country Level Impact of COVID-19 on the Economy and Labour Market", 2020.

- The ILO has conducted a **global survey on youth and COVID-19** in partnership with the Global Initiative on Decent Jobs for Youth, which focused on employment, skills, rights and mental health and generated 12,000 responses from 112 countries.
- To help prevent and control COVID-19 at work, an [action checklist](#) was developed and issued in 20 languages. [Sector-specific guidance and tools](#) for assessing and mitigating infection risks, a policy brief and [practical guidance](#) for ensuring the safe return to work, a [manual for managing work-related psychosocial risks](#), and a [Practical Guide on Teleworking during the COVID-19 pandemic and beyond](#) were developed as well.
- The Office has prepared policy briefs ²⁵⁷ and tools on informal employment, including for domestic workers, policy guidance for the protection of migrant workers and the rights at work of refugees and forcibly displaced persons during the COVID-19 pandemic, with a special emphasis on gender equality in the response to COVID-19.
- Since March 2020, the Office has **reinforced its action** ²⁵⁸ to support the tripartite constituents in their crisis responses, including through briefs on the need for social dialogue. ²⁵⁹ The Bureaux of Employers' and Workers' activities (ACT/EMP and ACTRAV) produced relevant policy and knowledge materials with information on the impacts of the pandemic on business and workers. In addition to the data collected for the COVID-19 Information hub, ACT/EMP carried out a global survey on the impact of the pandemic on employer and business membership organizations and their operations. ACTRAV collaborated with workers' organizations across the globe to collect and disseminate national trade union responses to the pandemic, including with regard to social dialogue processes, government measures and violation of workers' rights – with a focus on the most vulnerable (such as migrant workers, frontline health workers and informal economy workers) and organized more than 40 webinars for trade unions, operating globally, regionally and at national level.

258. The ILO efforts in supporting its constituents to strengthen their TVET and skills systems within the broader employment and decent work agenda have been redoubled ²⁶⁰ during these difficult times, building on already existing initiatives:

- The ILO has launched a massive open online course (MOOC) on quality apprenticeships (29 June–7 August 2020) with participants from more than 125 countries. The primary objective of the MOOC is to support participants in the design and implementation of quality apprenticeships in the fast-changing world of work and to address the challenges posed by COVID-19. Its first part targets policymakers and highlights effective strategies and innovative solutions for developing apprenticeship systems and policies; the second part targets practitioners and focuses on practicalities at the operational level, including the

²⁵⁷ See ILO, "ILO Standards and COVID-19 (Coronavirus): Key Provisions of International Labour Standards Relevant to the Evolving Covid19 Outbreak", 2020.

²⁵⁸ GB.335/INS/3(Rev.).

²⁵⁹ See for example ILO, "Employers and Workers Negotiating Measures to Prevent the Spread Of Covid-19, Protect Livelihoods and Support Recovery: A Review of Practice", 2020.

²⁶⁰ GB.340/INS/18/6.

planning, designing, implementation, monitoring and evaluating of apprenticeship programmes.

- The ILO's training facility and knowledge management network facilitates collaboration on skills. The ILO supports Member States in the process of expanding distance and online learning programmes in response to the crisis and facilitates the shift towards blended learning. The International Training Centre of the ILO organized virtual courses on topics ranging from the promotion of youth employment in the context of COVID-19 to employment services for effective job transitions, e-coaching for high-level skills development decision-makers to respond to COVID-19 challenges, and online courses for capacity-building of TVET institutions and trainers to bring TVET training online.
- The ILO/CINTERFOR is being repositioned as an innovation lighthouse and will support constituents in developing the skills needed for the economic transformation and future of work. CINTERFOR is contributing to the common efforts with an observatory of the distance learning actions taken by TVET in Latin America, Spain and Portugal; a survey of TVET members institutions to deal with the COVID-19 crisis; a brief on the TVET institutions responses; and a database with online courses and digital resources to share with member institutions.²⁶¹

259. At **country level**, the ILO supports national TVET systems and agencies to migrate programmes to distance and online learning modes, providing advice on available tools and platforms and examples of how countries are responding to the challenge. National-level activities include support for national statistical offices, revisions and updates of national employment strategies and policy advice and technical assistance. Working with the social partners, the Office is supporting and encouraging social dialogue as a key tool to develop programmes and channel resources to distance and online learning for TVET and skills development. In many cases, the measures support the operation of education and training systems and also include employment retention programmes, stimulus packages and expanded social protection measures.

260. The Office has also prepared a series of 17 **sectoral briefs** and developed new sector-specific guidance and checklists to prevent and control COVID-19 in the agriculture, education, health services, mining, shipping, textiles, clothing, leather and footwear sectors, in collaboration with the Food and Agriculture Organization of the United Nations (FAO), the International Maritime Organization, UNESCO and the World Health Organization.

6.2. Skills partnerships and development cooperation

261. The ILO's technical expertise, long-standing field experience and legitimacy to convene a wide range of stakeholders make it a truly unique development cooperation partner in the area of skills and lifelong learning. It has strategically expanded its partnerships with global, regional and national partners and supported its constituents as convener, adviser and knowledge partner in their efforts to establish effective and inclusive skills and lifelong learning systems.

²⁶¹ See [CINTERFOR website](#).

In 2010, the ILO developed, as requested by G20 leaders, the G20 Training Strategy²⁶² and has since then been helping a number of countries with its implementation.

- 262.** While primary responsibility for education, pre-employment training and training for the unemployed lies with governments,²⁶³ new partnerships and cooperation modalities provide opportunities for both constituents and the ILO to leverage the Decent Work Agenda and the 2030 Agenda through global advocacy, alliances and cooperation.²⁶⁴ Such partnerships include cooperation with other international organizations, development agencies of Member States, international financial institutions, regional unions of Member States and private entities, as foreseen by the ILO Declaration on Social Justice for a Fair Globalization and the Resolution on Advancing Social Justice through Decent Work.
- 263.** Negotiated framework agreements signed by the ILO with other intergovernmental organizations facilitate strategic partnerships at global, regional and country levels. The ILO is an active member of a number of inter-agency networks on skills development, WBL and lifelong learning, and as such strategically engages with other international and regional agencies such as the European Centre for the Development of Vocational Training, the European Training Foundation, the FAO, IOM, the International Telecommunication Union, OECD, UNESCO, the United Nations Environment Programme, UNDP, the Office of the United Nations High Commissioner for Refugees (UNHCR), the United Nations Children's Fund (UNICEF), the United Nations Industrial Development Organization and the United Nations Institute for Training and Research. The strategic areas pursued through such partnerships include regional and national qualification frameworks, digital skills, skills for trade, skills anticipation, skills for green jobs, skills for migration and skills for persons with disabilities.
- 264.** The ILO's major multilateral and bilateral partners on skills and lifelong learning include the African Development Bank (AfDB), Australia, Belgium (Government of Flanders), Canada, China, Colombia, the EU, FAO, France, Germany, Italy, Japan, the Netherlands, Norway, the Republic of Korea, the Russian Federation, Sweden, Switzerland, UNDP, UNICEF, the United Kingdom and the United States. The ILO currently implements development cooperation projects on skills and lifelong learning in 57 countries.
- 265.** In recent years, the ILO has strengthened its partnerships with financial institutions, especially regional financial institutions, in the skills domain. Two projects have been implemented with AfDB and a bilateral meeting has been held to discuss areas of further collaboration. A bilateral meeting with ADB has also been held to explore possible areas of collaboration.
- 266.** In addition, multi-stakeholder partnerships, often including the private sector, are an emerging form of collaboration in which the ILO engages. Such collaborations include the Global Apprenticeship Network (an IOE/ILO/OECD led initiative derived from the B20 Dialogue process), and PROSPECTS (spearheaded by the Government of the Netherlands bringing together the International Finance Corporation, UNHCR, UNICEF, the World Bank Group and the ILO). They also include the Global Initiative on Decent Jobs for Youth, which is the first comprehensive UN system-wide effort for the promotion of youth employment worldwide. It

²⁶² ILO, *A Skilled Workforce*.

²⁶³ ILO Recommendation No. 195, Para. 5(d).

²⁶⁴ ILO, *Towards 2030: Effective development cooperation in support of the Sustainable Development Goals*, ILC.107/IV (2018).

brings together the vast global resources and convening power of the UN and other global key partners to maximize the effectiveness of youth employment investments and assist Member States in delivering on the 2030 Agenda. There is a strong focus on skills in this partnership. The alignment has been achieved between the Global Initiative on Decent Jobs for Youth and the Generation Unlimited, based on the annex of the Memorandum of Understanding between the ILO and UNICEF signed in October 2020.

267. The partnerships of the ILO highlight the importance of multilateralism as a response to global challenges, especially during the current coronavirus pandemic. Joint efforts have achieved the following:

- The ILO featured 12 high level e-forums and 3 webinars, webinars on the impact of COVID-19 on WBL to examine the impact of COVID-19 on training and development of employees, apprentices and interns in enterprises and other organizations, which benefited from support from the following development partners: European Centre for the Development of Vocational Training (CEDEFOP); European Training Foundation (ETF); OECD; European Commission; Global Apprenticeship Network (GAN); Swiss Federal Institute for Vocational Education and Training; Donor Committee for Dual Vocational Education and Training; ILO/CINTERFOR.
- A joint ILO/UNESCO/World Bank survey of TVET providers took stock of the effects of the pandemic on training and learning, analysed challenges and shared good practices through a survey and the resulting report.²⁶⁵
- A joint global survey on staff development and training in the context of COVID-19 pandemic, targeted at public and private enterprises and other organizations, was initiated by the ILO within the framework of the Inter-Agency Working Group on Work-based Learning and in partnership with GAN, UNESCO, the European Commission, ETF, CEDEFOP, OECD, AfDB, ADB and the World Bank Group. This survey reviews the skills training situation in enterprises before COVID-19 and how and to what extent the crisis has impacted skills development in the workplace, including through WBL and apprenticeship practices.
- Ad hoc surveys, including on enterprises providing apprenticeship training, career guidance systems and skills policy development, such as a joint international survey conducted in cooperation with CEDEFOP, the European Commission, ETF, the International Centre for Career Development and Public Policy, OECD and UNESCO,²⁶⁶ were also undertaken.

268. Responding to the huge societal needs to address the impact of the crisis and co-shape the global restart and recovery of the world of work by applying a human-centred approach, the ILO can take on the role of international leadership in skills and lifelong learning (box 26).

► **Box 26. Towards global leadership of the ILO on skills and lifelong learning**

As described in this report, the ILO is an important player in the area of skills and lifelong learning. Through its normative framework and tripartite structure, the ILO is best placed to further

²⁶⁵ ILO/UNESCO/World Bank.

²⁶⁶ ILO et al., *Career Guidance Policy and Practice in the Pandemic: Results of a Joint International Survey*, 2020.

strengthen its leadership, building on the substantive work that has already been done, particularly to provide leadership on skills development with a lifelong learning approach covering several transitions, including school-to-work and work-to-work transitions. For this to happen in the biennium 2021–22 and beyond, the ILO needs to:

- become the global centre of excellence for knowledge, information and research related to skills and lifelong learning, based on in-depth and innovative research;
- provide evidence-based policy advice through the development and use of innovative, well-tested approaches and tools;
- raise awareness of relevant ILO standards and promote their implementation;
- build and strengthen partnerships at the global, national and local levels;
- further promote its comparative advantages, including its tripartite approach and normative agenda, demonstrating their importance for building future-oriented skills ecosystems;
- build the capacity of all stakeholders involved, especially workers and employers, so that they can play an active role in the design, implementation, and monitoring and evaluation of all interventions linked to skills and lifelong learning;
- provide technical support and advice to constituents;
- lead by example, involving constituents in the design and implementation of all interventions and undertaking rigorous evaluations of approaches and interventions;
- scale up support to Member States in order to replicate and implement successful interventions and new approaches to establishing new-generation skills and lifelong learning ecosystems.

► Chapter 7

Towards an ILO skills and lifelong learning strategy 2030: Skilling all workers for a brighter future

- 269.** The future of work discussions and Centenary Declaration have generated a strong momentum for skills and lifelong learning. The Declaration states that, given the profound transformations in the world of work and its human-centred approach to the future of work, the ILO must direct its efforts to promoting the acquisition of skills, competencies and qualifications for all workers throughout their working lives as the joint responsibility of governments and social partners.²⁶⁷ The ILO's Strategic Plan for 2022–25 calls for particular emphasis and effort on “[f]acilitating lifelong learning paths and labour market transition”.²⁶⁸ The Programme and Budget for 2020–21 and the proposed Programme and Budget for 2022–23 translated this vision for skills and lifelong learning into concrete plans for actions under outcome 5, “Skills and lifelong learning to facilitate access to and transitions in the labour market”.²⁶⁹ Similarly, these responses complement the 2030 Agenda,²⁷⁰ which calls for ensuring inclusive and equitable quality education and promoting lifelong learning for all (Goal 4) and promoting sustainable economic growth, productive employment and decent work for all (Goal 8). The economic and social impact of the unexpected COVID-19 crises created a new momentum for a human-centred global cooperation action to strengthen the resilience of skills and lifelong learning systems for the years to come. All this offers a valuable opportunity to discuss a long-term vision for the ILO's strategic approach to skills and lifelong learning, one that will strategically rethink and strengthen its global leadership and coordination in this area within the UN policy agenda.
- 270.** Discussing the Independent evaluation of ILO's strategy and actions to promote skills development for jobs and growth, 2010–2015,²⁷¹ the Governing Body recommended that the ILO consolidate its skills strategy into a single document. In addition to already existing policy and programming elements, such a coherent strategy needs to fully reflect the guidance provided by the Centenary Declaration and the emphasis laid on skills in the ILO Strategic Plan for 2022–2025. This renewed, integrated and innovative strategy should have a longer-term perspective up to 2030 (“ILO skills and lifelong learning strategy 2030”) so as to ensure a shared understanding of goals and priorities, to shape and guide the ILO's actions and to focus efforts and resources, thereby enhancing the ability of the Office to address global skills policy gaps together with its constituents. Consistent with this report, such a strategy could comprise some or all of the following elements.
- 271. Recognizing skills and lifelong learning as drivers for the future we want.** Identifying and delivering future skills is critically important if a human-centred future of work is to be realized. Addressing existing and emerging skills needs and increasing the capacity of

²⁶⁷ ILO, Centenary Declaration, Part II(A)(iii).

²⁶⁸ GB.340/PFA/1(Rev.1), para. 32.

²⁶⁹ ILO, *Programme and Budget for 2020–21*, 28.

²⁷⁰ UN General Assembly resolution 70/1, Transforming our world: the 2030 Agenda for Sustainable Development, A/RES/70/1, 2015.

²⁷¹ ILO, *Independent Evaluation of the ILO's Strategy and Actions to Promote Skills Development for Jobs and Growth, 2010–2015*, 2016.

systems to respond to them will be crucial for education and training systems to keep abreast of global challenges and turn them into opportunities. The ILO can contribute to identifying barriers, improving global data and knowledge bases and developing effective anticipation mechanisms to support informed policy decisions and shape demand-driven skills and lifelong learning systems.

272. Supporting systems to innovate and deliver. Skills systems need to be ready for the future. This implies rethinking and reshaping systems to more effectively adjust to challenges and seize opportunities. New solutions are needed to improve quality and responsiveness and ensure adequate learning opportunities throughout people's lives. By fostering tripartite dialogue, providing knowledge and policy advice and building institutional capacities, the Office can:

- support the design and scaling up of new solutions for skills and career development (including the Skills Innovation Facility);
- support the balanced adoption of digital technologies to enhance distance and blended learning;
- support innovative modalities for teaching, learning, assessment and certification in skills and lifelong learning ecosystems;
- build partnerships between education and training institutions and businesses, in particular through apprenticeships;
- support the development and improvement of standards and tools (for example on quality apprenticeships);
- promote a culture of continued improvement through the development of appropriate monitoring, evaluation and quality assurance mechanisms.

273. Creating opportunities for all. Effective models for equitable access to lifelong learning, recognition and utilization of skills need to be more actively promoted. Assessing and understanding the aspirations and potentials of individuals and the needs of vulnerable groups, promoting career guidance and outreach are valuable instruments for raising awareness about learning solutions, empowering individuals to use them and better targeting training offers and incentives. Mainstreaming gender equality in skills and lifelong learning systems and implementing programmes to promote partnerships in this area is another unique opportunity for the ILO, in cooperation with other international organizations, to contribute its expertise.

274. Fostering social dialogue and shared responsibilities for good governance and sustainable financing. The work of the Office can support the advancement of, and engagement in, effective social dialogue on skills and lifelong learning and can foster shared responsibilities, improved coordination, sustainable financing and effective institutional arrangements in a whole-of government approach. Financing mechanisms and incentive structures should be promoted in an integrated approach that links lifelong learning with social protection and macroeconomic and development policies to create more sustainable financing models. Non-financial incentives, technical and administrative support should be available to help enterprises make successful and strategic use of available financing and financial incentives.

275. Taken together, these elements can underpin a more coherent approach to skills development by the ILO, based on a clear strategy to address the key issues that will deliver the human-centred future of work that we aspire to.

► Appendix I

Selected instruments

Instrument	Data requirements	Technical expertise	Advantages	Disadvantages
Focus groups, round tables, expert workshops, expert opinion surveys and Delphi style methods	<ul style="list-style-type: none"> ● No specific data requirements 	<p>Technical expertise in qualitative methods is required:</p> <ul style="list-style-type: none"> ● Expertise in preparation of (structured) interviews, focus groups, Delphi methods, etc. ● Synthesizing qualitative outcomes often proves to be challenging in new contexts 	<ul style="list-style-type: none"> ● Holistic ● Direct user involvement ● May be able to address problems in greater depth ● Useful mechanisms for exchanging views 	<ul style="list-style-type: none"> ● May be non-systematic ● May be inconsistent ● May be subjective ● May be non-representative and provide a partial view ● May be anecdotal, not grounded in reality
Sector studies	<ul style="list-style-type: none"> ● Some data requirement (depending on methods used within sector) ● Sector-based data from statistical surveys; employer-employee surveys, etc. 	<p>Technical expertise required:</p> <ul style="list-style-type: none"> ● Understanding sector-based labour markets, occupations and skills requirements ● Analysis of primary and secondary data ● If primary data has to be collected: survey methodology skills 	<ul style="list-style-type: none"> ● Holistic (for the sector) ● Strong on sectoral specifics, including detailed information on capabilities, competencies and skills 	<ul style="list-style-type: none"> ● Partial (beyond sector) ● Potentially biased ● May introduce inconsistency across sectors
Employer-employee skills surveys; enterprise/establishment skills surveys	<ul style="list-style-type: none"> ● A firm registry from which the sample frame will be formed ● No further data needed for the primary data collection survey 	<ul style="list-style-type: none"> ● Survey design and conduct (representativeness, weighting, questionnaire design, interviewer training) ● Analysis of survey outcomes ● Methods to ensure representativeness 	<ul style="list-style-type: none"> ● Direct user involvement ● If the survey is factual, focuses on how people behave, not on what they perceive ● In case of opinion surveys, allows direct skills measurement 	<ul style="list-style-type: none"> ● Response rates are often too low ● Large samples are needed to get robust data, therefore may be expensive ● May be subjective and inconsistent
Quantitative forecasting models	<ul style="list-style-type: none"> ● Reliable and consistent time series on labour markets (sector, occupation, qualification) and population (age, gender, labour market participation) is necessary 	<ul style="list-style-type: none"> ● Expertise in modelling ● Statistical and programming experience ● Several years of experience (with a new model) is required to produce sensible analyses 	<ul style="list-style-type: none"> ● Comprehensive ● Consistent ● Transparent and explicit ● Measurable 	<ul style="list-style-type: none"> ● Data hungry ● Costly ● Not everything is quantifiable ● May give false impression of precision

Instrument	Data requirements	Technical expertise	Advantages	Disadvantages
Foresights and scenario development	<ul style="list-style-type: none"> ● May use a number of input data and reports, such as results of quantitative forecasts, labour market information, sector studies, but it is not compulsory 	<ul style="list-style-type: none"> ● Foresight sessions require skilful moderators ● Expertise in compiling diverse qualitative information into a report ● Expertise in engagement of all stakeholders 	<ul style="list-style-type: none"> ● Holistic ● Direct user involvement ● May be able to address problems in greater depth ● Useful mechanisms for exchanging views ● Takes into account uncertainties for the future 	<ul style="list-style-type: none"> ● May be non-systematic ● May be inconsistent ● May be subjective
Graduate surveys/tracer studies	<ul style="list-style-type: none"> ● Primary data collection ● Tracer studies require the contact details of recent graduates ● Additional administrative data from the education institutions can be used to enrich data 	<ul style="list-style-type: none"> ● Survey design and conduct; (representativeness, weighting, questionnaire design, interviewer training) ● Analysis of survey outcomes ● Methods to ensure representativeness 	<ul style="list-style-type: none"> ● May provide useful information for improving quality of training programmes ● Relatively low-cost, easy execution 	<ul style="list-style-type: none"> ● Difficult to establish detailed information and contacts for forming a sample/population for the survey ● Confined to workers' early market experience and findings may be biased and subjective
Vacancy surveys	<ul style="list-style-type: none"> ● Primary data collection ● Vacancy surveys can either use existing administrative data or processes of public employment services, or they can be conducted as employer surveys. Using administrative data requires adequate processes ensuring consistency and representativeness of data 	<ul style="list-style-type: none"> ● Survey design and conduct (representativeness, weighting, questionnaire design, interviewer training) ● Analysis of administrative data and survey outcomes ● Methods to ensure representativeness 	<ul style="list-style-type: none"> ● Direct user involvement ● Targets jobs actually available – demand proxy ● Objective 	<ul style="list-style-type: none"> ● Partial coverage, non-representative for all demand ● Short-term demand only ● Data processing takes time, during which some of the vacancies surveyed may already be filled

Source: ILO and OECD, 2018.

► Appendix II

The ILO's normative framework on skills and lifelong learning

The ILO's mandate for skills, training and lifelong learning is based on the following international labour standards and other instruments.

Instrument	Relevant highlights
Paid Educational Leave Convention, 1974 (No. 140)	Formulates the term “paid educational leave” as leave granted to a worker for educational purposes (training at any level, general, social and civic education, trade union education) for a specific period during working hours, with adequate financial entitlements.
Human Resources Development Convention, 1975 (No. 142)	Recognizes education, training and lifelong learning as fundamental to promoting the interests of individuals, enterprises, the economy and society as a whole in the pursuit of full employment, poverty eradication, social inclusion and sustained economic growth. Across 12 articles, it provides details on how governments, employers and workers can contribute towards lifelong learning.
Human Resources Development Recommendation, 2004 (No. 195)	Provides specific details on how governments, employers and workers can contribute towards lifelong learning, including in the areas of development and implementation of education and training policies; education and pre-employment training; development of competencies; training for decent work and social inclusion; development of frameworks for recognition and certification of skills; reform of training providers; career guidance and training support services; research in human resources development, education, training and lifelong learning; and international cooperation.
Resolution and conclusions on skills for improved productivity, employment growth and development adopted by the International Labour Conference (2008)	Defines a more holistic approach to skills development, with a focus on learning pathways throughout life; the development of core and high-level skills and ways to ensure their portability; and the commitment to improving employability skills.

Instrument	Relevant highlights
Resolution and conclusions entitled “The youth employment crisis: A call for action”, ¹ adopted by the International Labour Conference (2012)	Supplements the conclusions concerning youth employment adopted in 2005, affirming a multilevel and balanced approach that takes into consideration the diversity of country situations to respond to the need to generate decent jobs for young people. The Office is requested to enhance its capacity in five policy areas, including employability (education, training and skills, and school-to-work transition). In March 2020, the Governing Body will discuss an extension of the call for action, including ways to engage in continued action on employment and skills for young people and lifelong learning.
ILO Declaration on Social Justice for a Fair Globalization	Expresses the ILO’s and its constituents’ vision in an era of increased globalization, emphasizing that employment and skills development must be placed at the centre of trade and financial market policies.
Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204)	Identifies a number of measures to facilitate the transition to the informal economy, including policies to enhance access to education, lifelong learning and skills development as an integral part of a comprehensive policy approach. Such policies should, among others, recognize prior learning such as through informal apprenticeship systems, thereby broadening options for formal employment.
Employment and Decent Work for Peace and Resilience Recommendation, 2017 (No. 205)	Provides a normative framework that focuses on measures related to the world of work in order to prevent and respond to the effects of crises on economies and societies. It specifically recognizes the key role of skills development for the local population and refugees. It requests constituents to support the public sector and promote socially, economically and environmentally responsible public–private partnerships and other mechanisms for skills and capacity development and employment generation. It also stresses the importance of skills during recovery and reconstruction processes and the importance of skills identification, recognition and acquisition of skills for refugees and returnees.
Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy	First adopted in 1977 and most recently revised in 2017, it emphasizes the importance of training for all levels of workers employed in host countries so that they may develop generally “useful skills” and promote career opportunities and lifelong learning. In developing countries, multinational enterprises should also participate in programmes with “the aim of encouraging skill formation”. Multinational enterprises should also make skilled resource personnel available to training programmes organized by the government as part of their contribution to national development.

Instrument	Relevant highlights
Guidelines for a just transition towards environmentally sustainable economies and societies for all	Emphasize the importance of skills training and upgrading, as well as effective skills development policies in the context of such transitions.
ILO/UNESCO Recommendation concerning the Status of Teachers (1966)	Recognize the essential role of teachers, including in TVET, in educational advancement and the importance of their contribution to the development of people and society.

¹ See ILO, “Youth Employment”.

► Appendix III

Model for a skills and lifelong learning ecosystem

Guiding principles

- Integrate skills and lifelong learning in the social and economic policy agenda
- Strengthen partnerships between the world of learning and the world of work
- There is a two-way path between learning and work
- Lifelong learning is a key organisational culture of “learning organizations” and a necessity for the learner
- Skilling is for everyone
- Skills is everyone’s responsibility

Two levels of intervention

1. National strategies, policies and interventions
2. Global responses, led by the ILO

Challenges for skills and lifelong learning

The skills “issues”:

- Poor information and data on the supply and demand side
- Skills gaps and shortages
- Poor skills utilisation
- Poor social image of apprenticeships and TVET
- Inclusion of vulnerable people

The innovation delivery lag

- Limited learning pathways and fragmented interventions
- Shortcomings in qualifications to measure and evaluate actual skills
- Slow response mechanisms to labour market needs
- Curriculum overload and time lag
- Supply driven programmes
- Limited partnership with business
- Slow penetration of new technologies and innovation, including in preparing teachers and trainers; resistance to change

The “forgotten learners”

- Equity and equality deficits; low participation rates of key groups
- Barriers to access, learning and employment
- Limited support for job transitions

Skills do not come alone and for free

- Fragmented governance
- Insufficiently enabling frameworks
- Under-investment in adult education
- Insufficient investment and inadequate financing of institutions and programmes
- Limited incentives for individuals and enterprises
- Ad hoc partnerships and limited social dialogue on skills

Skills and lifelong learning policy options and solutions

Identify and meet the skills needs

- Strengthen skills and labour market information systems using systematic approaches (including innovative methods) to future skills demand anticipation
- Meet higher skills demands
- Improve guidance and counselling
- Increase participation in TVET in particular apprenticeships
- Inform standards, curricula and programmes
- Inform policies and business practices on productivity and decent work

Reshape and innovate skills systems (skills development, delivery, recognition and utilisation)

- “Open-up” education; integrate provision and move towards lifelong learning
- Qualifications and curricula: develop flexible and agile skills-based response mechanisms for dynamic skills needs, ensure portability of rights and skills, update training programmes and offers
- Move towards competence-based and demand-driven standards
- Use innovative models of apprenticeships and traineeships;
- Create local and sectoral ecosystems and centres of excellence
- Speed up digital transformation
- Prepare teachers and trainers for the new teaching and learning
- Recognise and use skills; shape lifelong learning culture, shift HR strategically and match skills to work requirements
- Encourage firms to move up the value-added chain

Strengthen capabilities of all individuals

- Ensure participating in learning through targeted re-skilling and upskilling for all workers throughout their working lives and for transitions between jobs; unlock potential
- Tackle inequalities by removing barriers and addressing needs and promote access to skills development for all; mainstream gender equality, develop skills for workers in the informal economy, for migrants and refugees, for NEETs and older workers and all other categories of under-represented learners
- Combine skills development with guidance and counselling, social protection, post-training support and activate through ALMPs

New governance and financial arrangements: Effective, efficient, shared and sustainable governance and financing

- Increase funding
- Strengthen social dialogue and tripartite cross-sectoral governance
- Increasing capacity and active engagement of social partners
- Use apprenticeships and traineeships
- Define and agree stakeholders’ roles and responsibilities; upgrade institutions
- Increase research and policy design capacity
- Promote sectoral approach
- Mobilize, pool and share resources, ensure public-private partnerships
- Use finances in an effective and efficient way